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Elliptically Contoured Models in Statistics Aug 24 2019 In multivariate statistical analysis, elliptical distributions have recently provided an alternative to the normal model. Most of the work, however, is spread out in journals throughout the world and is not easily accessible to the investigators. Fang, Kotz, and Ng presented a systematic study of multivariate elliptical distributions, however, they did not discuss the matrix variate case. Recently Fang and Zhang have summarized the results of generalized multivariate analysis which include vector as well as the matrix variate distributions. On the other hand, Fang and Anderson collected research papers on matrix variate elliptical distributions, many of them published for the first time in English. They published very rich material on the topic, but the results are given in paper form which does not provide a unified treatment of the theory. Therefore, it seemed appropriate to collect the most important results on the theory of matrix variate elliptically contoured distributions available in the literature and organize them in a unified manner that can serve as an introduction to the subject. The book will be useful for researchers, teachers, and graduate students in statistics and related fields whose interests involve multivariate statistical analysis. Parts of this book were presented by Arjun K Gupta as a one semester course at Bowling Green State University. Some new results have also been included which generalize the results in Fang and Zhang. Knowledge of matrix algebra and statistics at the level of Anderson is assumed. However, Chapter 1 summarizes some results of matrix algebra.

Multivariate Analysis Sep 05 2020 Structural Sensitivity in Econometric Models Edwin Kuh, John W. Neese and Peter Hollinger Provides a pathbreaking assessment of the worth of linear dynamic systems methods for probing the behavior of complex macroeconomic models. Representing a major improvement upon the standard "black box" approach to analyzing economic model structure, it introduces the powerful concept of parameter sensitivity analysis within a linear systems root/vector framework. The approach is illustrated with a good mediumsize econometric model (Michigan Quarterly Econometric Model of the United States). EISPACK, the Fortran code for computing characteristic roots and vectors has been upgraded and augmented by a model linearization code and a broader algorithmic framework. Also features an interface between the algorithmic code and the interactive modeling system

(TROLL), making an unusually wide range of linear systems methods accessible to economists, operations researchers, engineers and physical scientists. 1985 (0-471-81930-1) 324 pp. Linear Statistical Models and Related Methods With Applications to Social Research John Fox A comprehensive, modern treatment of linear models and their variants and extensions, combining statistical theory with applied data analysis. Considers important methodological principles underlying statistical methods. Designed for researchers and students who wish to apply these models to their own work in a flexible manner. 1984 (0 471-09913-9) 496 pp. Statistical Methods for Forecasting Bovas Abraham and Johannes Ledolter This practical, user-oriented book treats the statistical methods and models used to produce short-term forecasts. Provides an intermediate level discussion of a variety of statistical forecasting methods and models and explains their interconnections, linking theory and practice. Includes numerous time-series, autocorrelations, and partial autocorrelation plots. 1983 (0 471-86764-0) 445 pp.

Geometric Data Analysis Mar 24 2022 Geometric Data Analysis (GDA) is the name suggested by P. Suppes (Stanford University) to designate the approach to Multivariate Statistics initiated by Benzécri as Correspondence Analysis, an approach that has become more and more used and appreciated over the years. This book presents the full formalization of GDA in terms of linear algebra - the most original and far-reaching consequential feature of the approach - and shows also how to integrate the standard statistical tools such as Analysis of Variance, including Bayesian methods. Chapter 9, Research Case Studies, is nearly a book in itself; it presents the methodology in action on three extensive applications, one for medicine, one from political science, and one from education (data borrowed from the Stanford computer-based Educational Program for Gifted Youth). Thus the readership of the book concerns both mathematicians interested in the applications of mathematics, and researchers willing to master an exceptionally powerful approach of statistical data analysis.

Applied Multivariate Analysis Aug 05 2020 This book provides a broad overview of the basic theory and methods of applied multivariate analysis. The presentation integrates both theory and practice including both the analysis of formal linear multivariate models and exploratory data analysis techniques. Each chapter contains the development of basic theoretical results with numerous applications illustrated using examples from the social and behavioral sciences, and other disciplines. All examples are analyzed using SAS for Windows Version 8.0.

The Theory of Linear Models and Multivariate Analysis Nov 27 2019 Basic statistical definitions and theorems. Subspaces and projections. Properties of the multivariate and spherical normal distributions. Introduction to linear models. A sufficient statistic. Estimation. Tests about the mean. Simultaneous confidence intervals - scheffe type. Tests about the variance. Asymptotic validity of procedures under nonnormal distributions. James-Stein and Ridge estimators. Inference based on the studentized range distribution and bonferroni's inequality. The generalized linear model. The repeated measures model. Random effects and mixed models. The correlation model. The distribution theory for multivariate analysis. The multivariate one-and two-sample models - inference about the mean vector. The multivariate linear model. Discriminant analysis. Testing hypotheses about the covariance matrix. Simplifying the structure of the covariance matrix.

Statistical Methods for Meta-Analysis Mar 12 2021 The main purpose of this book is to address the statistical issues for integrating independent studies. There exist a number of papers and books that discuss the mechanics of collecting, coding, and preparing data for a meta-analysis , and we do not deal with these. Because this book concerns methodology, the content necessarily is statistical, and at times mathematical. In order to make the material accessible to a wider audience, we have not provided proofs in the text. Where proofs are given, they are placed as commentary at the end of a chapter. These can be omitted at the discretion of the reader. Throughout the book we describe computational procedures whenever required. Many computations can be completed on a hand calculator, whereas some require the use of a standard statistical package such as SAS, SPSS, or BMD. Readers with experience using a statistical package or who conduct analyses such as multiple regression or analysis of variance should be able to carry out the analyses described with the aid of a statistical package.

ARMA Model Identification Jan 28 2020 During the last two decades, considerable progress has been made in statistical time series analysis. The aim of this book is to present a survey of one of the most active areas in this field: the identification of autoregressive moving-average models, i.e., determining their orders. Readers are assumed to have already taken one course on time series analysis as might be offered in a graduate course, but otherwise this account is self-contained. The main topics covered include: Box-Jenkins' method, inverse autocorrelation functions, penalty function identification such as AIC, BIC techniques and Hannan and Quinn's

method, instrumental regression, and a range of pattern identification methods. Rather than cover all the methods in detail, the emphasis is on exploring the fundamental ideas underlying them. Extensive references are given to the research literature and as a result, all those engaged in research in this subject will find this an invaluable aid to their work.

Robustness of Statistical Tests Jun 14 2021 Robustness of Statistical Tests provides a general, systematic finite sample theory of the robustness of tests and covers the application of this theory to some important testing problems commonly considered under normality. This eight-chapter text focuses on the robustness that is concerned with the exact robustness in which the distributional or optimal property that a test carries under a normal distribution holds exactly under a nonnormal distribution. Chapter 1 reviews the elliptically symmetric distributions and their properties, while Chapter 2 describes the representation theorem for the probability ration of a maximal invariant. Chapter 3 explores the basic concepts of three aspects of the robustness of tests, namely, null, nonnull, and optimality, as well as a theory providing methods to establish them. Chapter 4 discusses the applications of the general theory with the study of the robustness of the familiar Student's r-test and tests for serial correlation. This chapter also deals with robustness without invariance. Chapter 5 looks into the most useful and widely applied problems in multivariate testing, including the GMANOVA (General Multivariate Analysis of Variance). Chapters 6 and 7 tackle the robust tests for covariance structures, such as sphericity and independence and provide a detailed description of univariate and multivariate outlier problems. Chapter 8 presents some new robustness results, which deal with inference in two population problems. This book will prove useful to advance graduate mathematical statistics students.

Methods of Multivariate Analysis, Basic Applications Feb 08 2021 The accompanying diskette contains all of the data sets and SAS command files for all of the examples. (SAS is the leading statistical computer package on the market.) Students can adapt these command files to work problems in the text.

Studies in Econometrics, Time Series, and Multivariate Statistics Sep 29 2022 Studies in Econometrics, Time Series, and Multivariate Statistics covers the theoretical and practical aspects of econometrics, social sciences, time series, and multivariate statistics. This book is organized into three parts encompassing 28 chapters. Part I contains

studies on logit model, normal discriminant analysis, maximum likelihood estimation, abnormal selection bias, and regression analysis with a categorized explanatory variable. This part also deals with prediction-based tests for misspecification in nonlinear simultaneous systems and the identification in models with autoregressive errors. Part II highlights studies in time series, including time series analysis of error-correction models, time series model identification, linear random fields, segmentation of time series, and some basic asymptotic theory for linear processes in time series analysis. Part III contains papers on optimality properties in discrete multivariate analysis, Anderson's probability inequality, and asymptotic distributions of test statistics. This part also presents the comparison of measures, multivariate majorization, and of experiments for some multivariate normal situations. Studies on Bayes procedures for combining independent F tests and the limit theorems on high dimensional spheres and Stiefel manifolds are included. This book will prove useful to statisticians, mathematicians, and advance mathematics students.

Social and Psychological Predictors of Information Seeking and Media Use Oct 31 2022

Multivariate Analysis Jun 22 2019

Issues in Reproductive Medicine Research: 2011 Edition Jul 16 2021 Issues in Reproductive Medicine Research / 2011 Edition is a ScholarlyEditions™ eBook that delivers timely, authoritative, and comprehensive information about Reproductive Medicine Research. The editors have built Issues in Reproductive Medicine Research: 2011 Edition on the vast information databases of ScholarlyNews.™ You can expect the information about Reproductive Medicine Research in this eBook to be deeper than what you can access anywhere else, as well as consistently reliable, authoritative, informed, and relevant. The content of Issues in Reproductive Medicine Research: 2011 Edition has been produced by the world's leading scientists, engineers, analysts, research institutions, and companies. All of the content is from peer-reviewed sources, and all of it is written, assembled, and edited by the editors at ScholarlyEditions™ and available exclusively from us. You now have a source you can cite with authority, confidence, and credibility. More information is available at http://www.ScholarlyEditions.com/.

Differentielle Prognostizierbarkeit von Schulleistung Apr 12 2021 In Schulen und Beratungsstellen geh5rt die Erstellung von Schulerfolgsprognosen mehr oder weniger zur alltaglichen Routine. Lehrer und Berater gutachten

uber das zukunftige Schulschicksal von Kindern. Nur selten wird dabei die unzu reichende theoretische wie empirische Fundierung dieses Tuns reflektiert. Die praktische Bedeutsamkeit eben so wie die wissenschaftliche Unzulanglichkeit von Schulleistungsprognosen waren Veranlassung zur Durchfuhrung der vorliegenden Unter suchung. Dabei steht imMittelpunkt dieser Arbeit die Ausein andersetzung mit dem Problem der globalen versus differentiellen Prognostizierbarkeit von Schulleistung. Durfen sich Vorhersagen von Schulleistung auf allgemeine, fur eine Gesarntgruppe von Schulern gultige Befunde stutz en oder muS die Zugeh5rigkeit des Schulers zu einer bestirnrnten, wie auch irnrner definierten, Unter gruppe berucksichtigt werden? Zur Klarung dieser Frage werden M5glichkeiten und Grenzen der globalen eben so wie der differen tiellen Vorhersage untersucht. Besonderes Gewicht hat dabei die Darstellung von Ansatzen, die Grundlagen zur Erstellung diffe rentieller Prognosen bieten k5nnen. Der Aufbau dieser Arbeit laSt sich wie folgt kurz skizzieren: Nach einer Diskussion der Problematik der Schulleistungsvorher sage und der Beschreibung der Durchfuhrung der Untersuchung, werden die univariaten Beziehungen zwischen den vorhers~gemerk rnalen und der Schulleistung analysiert. Sodann wird untersucht, inwieweit die "klassischen" multivariaten Ansatze (im Rahmen globaler Prognosen) zu einer Erh5hung der Vorhersagegenauigkeit beitragen k5nnen. Ob Moderatoranalysen, AID-Analysen bzw. die Typologische Pradiktion hinreichende Informationen fur diffe rentielle Prognosen zu liefern verm5gen, ist die Fragestellung der nachsten Kapitel. Besonders im Kontext der Typologischen Pradiktion spielen Klassifikationsverfahren (Clusteranalysen) eine bedeutsarne Rolle.

Handbook of Econometrics Sep 25 2019

Multivariate Statistics for Wildlife and Ecology Research Dec 21 2021 With its focus on the practical application of the techniques of multivariate statistics, this book shapes the powerful tools of statistics for the specific needs of ecologists and makes statistics more applicable to their course of study. It gives readers a solid conceptual understanding of the role of multivariate statistics in ecological applications and the relationships among various techniques, while avoiding detailed mathematics and the underlying theory. More importantly, the reader will gain insight into the type of research questions best handled by each technique and the important considerations in applying them. Whether used as a textbook for specialised courses or as a supplement to general statistics texts, the

book emphasises those techniques that students of ecology and natural resources most need to understand and employ in their research. While targeted for upper-division and graduate students in wildlife biology, forestry, and ecology, and for professional wildlife scientists and natural resource managers, this book will also be valuable to researchers in any of the biological sciences.

Elliptically Contoured Models in Statistics and Portfolio Theory Jul 04 2020 Elliptically Contoured Models in Statistics and Portfolio Theory fully revises the first detailed introduction to the theory of matrix variate elliptically contoured distributions. There are two additional chapters, and all the original chapters of this classic text have been updated. Resources in this book will be valuable for researchers, practitioners, and graduate students in statistics and related fields of finance and engineering. Those interested in multivariate statistical analysis and its application to portfolio theory will find this text immediately useful. ?In multivariate statistical analysis, elliptical distributions have recently provided an alternative to the normal model. Elliptical distributions have also increased their popularity in finance because of the ability to model heavy tails usually observed in real data. Most of the work, however, is spread out in journals throughout the world and is not easily accessible to the investigators. A noteworthy function of this book is the collection of the most important results on the theory of matrix variate elliptically contoured distributions that were previously only available in the journal-based literature. The content is organized in a unified manner that can serve an a valuable introduction to the subject. ?

The Oxford Handbook of Hypnosis Mar 31 2020 The Oxford Handbook of Hypnosis is the long overdue successor to Fromm and Nash's Contemporary Hypnosis Research (Guilford Press), which has been regarded as the field's authoritative scholarly reference for over 35 years. This new book is a comprehensive summary of where field has been, where it stands today, and its future directions. The volume's lucid and engaging chapters on the scientific background to the field, fully live up to this uncompromising scholarly legacy. In addition, the scope of the book includes 17 clinical chapters which comprehensively describe how hypnosis is best used with patients across a spectrum of disorders and applied settings. Authored by the world's leading practitioners these contributions are sophisticated, inspiring, and richly illustrated with case examples and session transcripts. For postgraduate students, researchers and clinicians, or anyone wanting to understand hypnosis as a form of treatment, this is the starting

point. Unequalled in its breadth and quality, The Oxford Handbook of Hypnosis is the definitive reference text in the field.

Matrix Variate Distributions Sep 17 2021 Useful in physics, economics, psychology, and other fields, random matrices play an important role in the study of multivariate statistical methods. Until now, however, most of the material on random matrices could only be found scattered in various statistical journals. Matrix Variate Distributions gathers and systematically presents most of the recent developments in continuous matrix variate distribution theory and includes new results. After a review of the essential background material, the authors investigate the range of matrix variate distributions, including: matrix variate normal distribution Wishart distribution Matrix variate t-distribution Matrix variate beta distribution F-distribution Matrix variate Dirichlet distribution Matrix quadratic forms With its inclusion of new results, Matrix Variate Distributions promises to stimulate further research and help advance the field of multivariate statistical analysis.

Theory of Multivariate Statistics Apr 24 2022 This book presents the main results of the modern theory of multivariate statistics for those who need a concise yet mathematically rigorous treatment. Researchers will find it to be an indispensable reference, presenting developments from recent work on broad topics such as robust inference and the bootstrap in a multivariate setting. The treatment is novel and unique in several ways, and will be refreshing to those saturated in a lifetime of matrix derivatives and Jacobians.

Stanford's Organization Theory Renaissance, 1970-2000 Jan 10 2021 Between 1970 and 2000, Stanford University enabled and supported an interdisciplinary community of organizations training, research, and theory building. This title summarizes the contributions of the main paradigms that emerged at Stanford in those three decades, and describes the sociological conditions under which this environment came about.

Modelle für kategoriale Daten mit ordinalem Skalenniveau Feb 20 2022

Encyclopedia of Statistical Sciences, Volume 1 Oct 26 2019 ENCYCLOPEDIA OF STATISTICAL SCIENCES

Developments in Statistics Nov 07 2020 Developments in Statistics, Volume 4 reviews developments in the theory and applications of statistics, covering topics such as time series, identifiability and model selection, and missing data. The application of structured exploratory data analysis to human genetics, specifically, the mode of inheritance,

is also considered. Comprised of four chapters, this volume begins with an introduction to spectrum parameter estimation in time series analysis, restricting the discussion to the simplest univariate (that is, scalar) real-valued time series X(t). An accurate formulation of the general problem is presented. The accuracy of different consistent estimates obtained for large but fixed values of T (maximum likelihood estimates, Whittle's estimates, and simplified asymptotically efficient estimates) is also compared. The next chapter deals with identifiability and modeling in econometrics, focusing on the theoretical framework relating realization theory, identification, and parametrization. The realization theory is illustrated on various levels of generality by means of examples related to econometrics, along with some advanced applications of system theory. The book also examines inference on parameters of multivariate normal populations when some data are missing before concluding with an evaluation of structured exploratory data as applied to the study of the mode of inheritance. This monograph will be of interest to students and practitioners of statistics.

Discriminant Analysis and Statistical Pattern Recognition May 14 2021 The Wiley-Interscience Paperback Series consists of selected books that have been made more accessible to consumers in an effort to increase global appeal and general circulation. With these new unabridged softcover volumes, Wiley hopes to extend the lives of these works by making them available to future generations of statisticians, mathematicians, and scientists. "For both applied and theoretical statisticians as well as investigators working in the many areas in which relevant use can be made of discriminant techniques, this monograph provides a modern, comprehensive, and systematic account of discriminant analysis, with the focus on the more recent advances in the field." –SciTech Book News ". . . a very useful source of information for any researcher working in discriminant analysis and pattern recognition." –Computational Statistics Discriminant Analysis and Statistical Pattern Recognition provides a systematic account of the subject. While the focus is on practical considerations, both theoretical and practical issues are explored. Among the advances covered are regularized discriminant analysis and bootstrap-based assessment of the performance of a sample-based discriminant rule, and extensions of discriminant analysis motivated by problems in statistical image analysis. The accompanying bibliography contains over 1,200 references.

Probability Inequalities in Multivariate Distributions Nov 19 2021 Probability Inequalities in Multivariate

Distributions is a comprehensive treatment of probability inequalities in multivariate distributions, balancing the treatment between theory and applications. The book is concerned only with those inequalities that are of types T1-T5. The conditions for such inequalities range from very specific to very general. Comprised of eight chapters, this volume begins by presenting a classification of probability inequalities, followed by a discussion on inequalities for multivariate normal distribution as well as their dependence on correlation coefficients. The reader is then introduced to inequalities for other well-known distributions, including the multivariate distributions of t, chi-square, and F; inequalities for a class of symmetric unimodal distributions and for a certain class of random variables that are positively dependent by association or by mixture; and inequalities obtainable through the mathematical tool of majorization and weak majorization. The book also describes some distribution-free inequalities before concluding with an overview of their applications in simultaneous confidence regions, hypothesis testing, multiple decision problems, and reliability and life testing. This monograph is intended for mathematicians, statisticians, students, and those who are primarily interested in inequalities.

Multivariate Analysis: Future Directions 2 Aug 29 2022 The contributions in this volume, made by distinguished statisticians in several frontier areas of research in multivariate analysis, cover a broad field and indicate future directions of research. The topics covered include discriminant analysis, multidimensional scaling, categorical data analysis, correspondence analysis and biplots, association analysis, latent variable models, bootstrap distributions, differential geometry applications and others. Most of the papers propose generalizations or new applications of multivariate analysis. This volume will be of great interest to statisticians, probabilists, data analysts and scientists working in the disciplines such as biology, biometry, ecology, medicine, econometry, psychometry and marketing. It will be a valuable guide to professors, researchers and graduate students seeking new and promising lines of statistical research.

Multivariate Calculation Jul 28 2022 Like some of my colleagues, in my earlier years I found the multivariate Jacobian calculations horrible and unbelievable. As I listened and read during the years 1956 to 1974 I continually saw alternatives to the Jacobian and variable change method of computing probability density functions. Further, it was made clear by the work of A. T. James that computation of the density functions of the sets of roots of

determinental equations required a method other than Jacobian calculations and that the densities could be calculated using differential forms on manifolds. It had become clear from the work ofC S. Herz and A. T. James that the expression of the noncentral multivariate density functions required integration with respect to Haar measures on locally compact groups. Material on manifolds and locally compact groups had not yet reached the pages of multivariate books of the time and also much material about multivariate computations existed only in the journal literature or in unpublished sets oflecture notes. In spirit, being more a mathematician than a statistician, the urge to write a book giving an integrated treatment of these topics found expression in 1974-1975 when I took a one year medical leave of absence from Cornell University. During this period I wrote Techniques of Multivariate Calculation. Writing a coherent treatment of the various methods made obvious re quired background material.

An R and S-Plus® Companion to Multivariate Analysis Jun 26 2022 Applied statisticians often need to perform analyses of multivariate data; for these they will typically use one of the statistical software packages, S-Plus or R. This book sets out how to use these packages for these analyses in a concise and easy-to-use way, and will save users having to buy two books for the job. The author is well-known for this kind of book, and so buyers will trust that he's got it right.

Group Invariance Applications in Statistics Oct 07 2020

Statistical Decision Theory and Bayesian Analysis Jul 24 2019 In this new edition the author has added substantial material on Bayesian analysis, including lengthy new sections on such important topics as empirical and hierarchical Bayes analysis, Bayesian calculation, Bayesian communication, and group decision making. With these changes, the book can be used as a self-contained introduction to Bayesian analysis. In addition, much of the decision-theoretic portion of the text was updated, including new sections covering such modern topics as minimax multivariate (Stein) estimation.

Statistical Multiple Integration Jun 02 2020 High dimensional integration arises naturally in two major sub-fields of statistics: multivariate and Bayesian statistics. Indeed, the most common measures of central tendency, variation, and loss are defined by integrals over the sample space, the parameter space, or both. Recent advances in computational power have stimulated significant new advances in both Bayesian and classical multivariate statistics.

In many statistical problems, however, multiple integration can be the major obstacle to solutions. This volume contains the proceedings of an AMS-IMS-SIAM Joint Summer Research Conference on Statistical Multiple Integration, held in June 1989 at Humboldt State University in Arcata, California. The conference represents an attempt to bring together mathematicians, statisticians, and computational scientists to focus on the many important problems in statistical multiple integration. The papers document the state of the art in this area with respect to problems in statistics, potential advances blocked by problems with multiple integration, and current work directed at expanding the capability to integrate over high dimensional surfaces.

Naval Research Reviews Oct 19 2021

Invariant Measures on Groups and Their Use in Statistics Aug 17 2021

Contributions to Probability and Statistics Dec 29 2019 Published in honor of the sixty-fifth birthday of Professor Ingram Olkin of Stanford University. Part I contains a brief biography of Professor Olkin and an interview with him discussing his career and his research interests. Part II contains 32 technical papers written in Professor Olkin's honor by his collaborators, colleagues, and Ph.D. students. These original papers cover a wealth of topics in mathematical and applied statistics, including probability inequalities and characterizations, multivariate analysis and association, linear and nonlinear models, ranking and selection, experimental design, and approaches to statistical inference. The volume reflects the wide range of Professor Olkin's interests in and contributions to research in statistics, and provides an overview of new developments in these areas of research.

U.S. Government Research Reports Feb 29 2020

A First Course in Multivariate Statistics Jan 22 2022 A comprehensive and self-contained introduction to the field, carefully balancing mathematical theory and practical applications. It starts at an elementary level, developing concepts of multivariate distributions from first principles. After a chapter on the multivariate normal distribution reviewing the classical parametric theory, methods of estimation are explored using the plug-in principles as well as maximum likelihood. Two chapters on discrimination and classification, including logistic regression, form the core of the book, followed by methods of testing hypotheses developed from heuristic principles, likelihood ratio tests and permutation tests. Finally, the powerful self-consistency principle is used to introduce principal components as a

method of approximation, rounded off by a chapter on finite mixture analysis.

Contemporary Multivariate Analysis and Design of Experiments May 26 2022 This book furthers new and exciting developments in experimental designs, multivariate analysis, biostatistics, model selection and related subjects. It features articles contributed by many prominent and active figures in their fields. These articles cover a wide array of important issues in modern statistical theory, methods and their applications. Distinctive features of the collections of articles are their coherence and advance in knowledge discoveries.

An Introduction to Multivariate Statistical Analysis Dec 09 2020 1. Introduction; 2. The multivariate normal distribution; 3. Estimation of the mean vector and the covariance matrix; 4. Distributions and uses of sample correlation coefficients; 5. The generalized T2-Statistic; 6. Classification of observations; 7. The distribution of the sample covariance matrix and the sample generalized variance; 8. Testing the general linear hypothesis; Multivariate analysis of variance; 9. Testing independence of sets of variates; 10. Testing hypothesis of equality of coariance matrices and equality of mean vectors and covariance matrices; 11. Principal components; 12. Canonical correlations and canonical variables; 13. The distributions of characteristic roots and vectors; 14. Factor analysis.

Improving Efficiency by Shrinkage May 02 2020 Offers a treatment of different kinds of James-Stein and ridge regression estimators from a frequentist and Bayesian point of view. The book explains and compares estimators analytically as well as numerically and includes Mathematica and Maple programs used in numerical comparison.;College or university bookshops may order five or more copies at a special student rate, available on request.