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Titolo	A First Course in Multivariate Statistics [[electronic resource] /] / by Bernard Flury
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	1. Why Multivariate Statistics? -- 2. Joint Distribution of Several Random Variables -- 3. The Multivariate Normal Distribution -- 4. Parameter Estimation -- 5. Discrimination and Classification, Round 1 -- 6. Statistical Inference for Means -- 7. Discrimination and Classification, Round 2 -- 8. Linear Principal Component Analysis -- 9. Normal Mixtures -- Appendix: Selected Results From Matrix Algebra -- A.0. Preliminaries -- A.1. Partitioned Matrices -- A.2. Positive Definite Matrices -- A.3. The Cholesky Decomposition -- A.4. Vector and Matrix Differentiation -- A.5. Eigenvectors and Eigenvalues -- A.6. Spectral Decomposition of Symmetric Matrices -- A.7. The Square Root of a Positive Definite Symmetric Matrix -- A.8. Orthogonal Projections on Lines and Planes -- A.9. Simultaneous Decomposition of Two Symmetric Matrices.
Sommario/riassunto	My goal in writing this book has been to provide teachers and students of multi- variate statistics with a unified treatment ofboth theoretical and practical aspects of this fascinating area. The text is designed for a broad readership, including advanced undergraduate students and graduate students in statistics, graduate students in bi- ology, anthropology, life sciences, and other areas, and postgraduate students. The style of this book reflects my beliefthat the common

distinction between multivariate statistical theory and multivariate methods is artificial and should be abandoned. I hope that readers who are mostly interested in practical applications will find the theory accessible and interesting. Similarly I hope to show to more mathematically interested students that multivariate statistical modelling is much more than applying formulas to data sets. The text covers mostly parametric models, but gives brief introductions to computer-intensive methods such as the bootstrap and randomization tests as well. The selection of material reflects my own preferences and views. My principle in writing this text has been to restrict the presentation to relatively few topics, but cover these in detail. This should allow the student to study an area deeply enough to feel comfortable with it, and to start reading more advanced books or articles on the same topic.