1.	Record Nr.	UNISA996495167003316
	Autore	Mathai Arak M
	Titolo	Multivariate Statistical Analysis in the Real and Complex Domains [[electronic resource] /] / by Arak M. Mathai, Serge B. Provost, Hans J. Haubold
	Pubbl/distr/stampa	Cham, : Springer Nature, 2022
		Cham : , : Springer International Publishing : , : Imprint : Springer, , 2022
	ISBN	3-030-95864-7
	Edizione	[1st ed. 2022.]
	Descrizione fisica	1 online resource (XXVII, 921 p. 3 illus.)
	Disciplina	519.5
	Soggetti	Mathematical statistics
		Statistics
		Multivariate analysis
		System theory
		Mathematical Statistics
		Statistical Theory and Methods
		Multivariate Analysis
		Complex Systems
		Anàlisi multivariable
		Llibres electrònics
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Nota di contenuto	1. Mathematical Preliminaries -- 2. The Univariate Gaussian and Related Distribution -- 3. Multivariate Gaussian and Related Distributions -- 4. The Matrix-variate Gaussian Distribution -- 5. Matrix-variate Gamma and Beta Distributions -- 6. Hypothesis Testing and Null Distributions -- 7. Rectangular Matrix-variate Distributions -- 8. Distributions of Eigenvalues and Eigenvectors -- 9. Principal Component Analysis -- 10. Canonical Correlation Analysis -- 11. Factor Analysis -- 12. Classification Problems -- 13. Multivariate Analysis of Variance (MANOVA) -- 14. Profile Analysis and Growth Curves -- 15. Cluster Analysis and Correspondence Analysis.

Sommario/riassunto

This book explores topics in multivariate statistical analysis, relevant in the real and complex domains. It utilizes simplified and unified notations to render the complex subject matter both accessible and enjoyable, drawing from clear exposition and numerous illustrative examples. The book features an in-depth treatment of theory with a fair balance of applied coverage, and a classroom lecture style so that the learning process feels organic. It also contains original results, with the goal of driving research conversations forward. This will be particularly useful for researchers working in machine learning, biomedical signal processing, and other fields that increasingly rely on complex random variables to model complex-valued data. It can also be used in advanced courses on multivariate analysis. Numerous exercises are included throughout.