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Titolo	Applied Compositional Data Analysis : With Worked Examples in R / / by Peter Filzmoser, Karel Hron, Matthias Templ
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Disciplina	519.5
Soggetti	Statistics Mathematical statistics - Data processing Geochemistry Biometry Social sciences - Statistical methods Statistics in Engineering, Physics, Computer Science, Chemistry and Earth Sciences Statistics and Computing Statistical Theory and Methods Biostatistics Statistics in Social Sciences, Humanities, Law, Education, Behavorial Sciences, Public Policy
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Nota di contenuto	Preface -- Acknowledgements -- Compositional data as a methodological concept -- Analyzing compositional data using R -- Geometrical properties of compositional data -- Exploratory data analysis and visualization -- First steps for a statistical analysis -- Cluster analysis -- Principal component analysis -- Correlation analysis -- Discriminant analysis -- Regression analysis -- Methods for high-dimensional compositional data -- Compositional tables -- Preprocessing issues -- Index.-.
Sommario/riassunto	This book presents the statistical analysis of compositional data using the log-ratio approach. It includes a wide range of classical and robust statistical methods adapted for compositional data analysis, such as

supervised and unsupervised methods like PCA, correlation analysis, classification and regression. In addition, it considers special data structures like high-dimensional compositions and compositional tables. The methodology introduced is also frequently compared to methods which ignore the specific nature of compositional data. It focuses on practical aspects of compositional data analysis rather than on detailed theoretical derivations, thus issues like graphical visualization and preprocessing (treatment of missing values, zeros, outliers and similar artifacts) form an important part of the book. Since it is primarily intended for researchers and students from applied fields like geochemistry, chemometrics, biology and natural sciences, economics, and social sciences, all the proposed methods are accompanied by worked-out examples in R using the package robCompositions.