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Descrizione fisica	1 online resource (261 pages)
Disciplina	519.502855133
Soggetti	Nonlinear theories R (Computer program language) Regression analysis
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Robust statistics -- Nonlinear models -- Robust estimators in nonlinear regression -- Heteroscedastic variance -- Authocorrelated errors -- Outlier detection in nonlinear regression -- Optimization -- Nlr package -- Robust nonlinear regression in R.
Sommario/riassunto	The first book to discuss robust aspects of nonlinear regression—with applications using R software Robust Nonlinear Regression: with Applications using R covers a variety of theories and applications of nonlinear robust regression. It discusses both parts of the classic and robust aspects of nonlinear regression and focuses on outlier effects. It develops new methods in robust nonlinear regression and implements a set of objects and functions in S-language under SPLUS and R software. The software covers a wide range of robust nonlinear fitting and inferences, and is designed to provide facilities for computer users to define their own nonlinear models as an object, and fit models using classic and robust methods as well as detect outliers. The implemented objects and functions can be applied by practitioners as well as researchers. The book offers comprehensive coverage of the subject in 9 chapters: Theories of Nonlinear Regression and Inference;

Introduction to R; Optimization; Theories of Robust Nonlinear Methods; Robust and Classical Nonlinear Regression with Autocorrelated and Heteroscedastic errors; Outlier Detection; R Packages in Nonlinear Regression; A New R Package in Robust Nonlinear Regression; and Object Sets. The first comprehensive coverage of this field covers a variety of both theoretical and applied topics surrounding robust nonlinear regression. Addresses some commonly mishandled aspects of modeling R packages for both classical and robust nonlinear regression are presented in detail in the book and on an accompanying website. Robust Nonlinear Regression: with Applications using R is an ideal text for statisticians, biostatisticians, and statistical consultants, as well as advanced level students of statistics.
