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Disciplina	519.5
Soggetti	Statistics Image processing - Digital techniques Computer vision Computer software Mathematical statistics - Data processing Biometry Statistical Theory and Methods Computer Imaging, Vision, Pattern Recognition and Graphics Mathematical Software Statistics in Business, Management, Economics, Finance, Insurance Statistics and Computing Biostatistics
Lingua di pubblicazione	Inglese
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Preface -- Common symbols and acronyms -- Contents -- 1 Introduction: Overview -- 2 SSA analysis of one-dimensional time series -- 3 Parameter estimation, forecasting, gap filling -- 4 SSA for multivariate time series -- 5 Image processing -- Index -- References.
Sommario/riassunto	This comprehensive and richly illustrated volume provides up-to-date material on Singular Spectrum Analysis (SSA). SSA is a well-known methodology for the analysis and forecasting of time series. Since quite recently, SSA is also being used to analyze digital images and other objects that are not necessarily of planar or rectangular form and may contain gaps. SSA is multi-purpose and naturally combines both

model-free and parametric techniques, which makes it a very special and attractive methodology for solving a wide range of problems arising in diverse areas, most notably those associated with time series and digital images. An effective, comfortable and accessible implementation of SSA is provided by the R-package Rssa, which is available from CRAN and reviewed in this book. Written by prominent statisticians who have extensive experience with SSA, the book (a) presents the up-to-date SSA methodology, including multidimensional extensions, in language accessible to a large circle of users, (b) combines different versions of SSA into a single tool, (c) shows the diverse tasks that SSA can be used for, (d) formally describes the main SSA methods and algorithms, and (e) provides tutorials on the Rssa package and the use of SSA. The book offers a valuable resource for a very wide readership, including professional statisticians, specialists in signal and image processing, as well as specialists in numerous applied disciplines interested in using statistical methods for time series analysis, forecasting, signal and image processing. The book is written on a level accessible to a broad audience and includes a wealth of examples; hence it can also be used as a textbook for undergraduate and postgraduate courses on time series analysis and signal processing.