Record Nr. UNINA9910438140003321 Autore Golyandina Nina **Titolo** Singular spectrum analysis for time series / / Nina Golyandina, Anatoly Zhigljavsky New York, : Springer, 2013 Pubbl/distr/stampa 1-299-19783-3 **ISBN** 3-642-34913-7 Edizione [1st ed. 2013.] 1 online resource (125 p.) Descrizione fisica Collana SpringerBriefs in statistics, , 2191-544X Altri autori (Persone) ZhigljavskyAnatoly Disciplina 330.1951 Time-series analysis Soggetti Spectral theory (Mathematics) **Decomposition (Mathematics)** Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Nota di bibliografia Includes bibliographical references. Nota di contenuto Introduction: Preliminaries -- SSA Methodology and the Structure of the Book -- SSA Topics Outside the Scope of this Book -- Common Symbols and Acronyms -- Basic SSA: The Main Algorithm -- Potential of Basic SSA -- Models of Time Series and SSA Objectives -- Choice of Parameters in Basic SSA -- Some Variations of Basic SSA -- SSA for Forecasting, interpolation, Filtration and Estimation: SSA Forecasting Algorithms -- LRR and Associated Characteristic Polynomials --Recurrent Forecasting as Approximate Continuation -- Confidence Bounds for the Forecast -- Summary and Recommendations on Forecasting Parameters -- Case Study: 'Fortified Wine' -- Missing Value Imputation -- Subspace-Based Methods and Estimation of Signal Parameters -- SSA and Filters. Singular spectrum analysis (SSA) is a technique of time series analysis Sommario/riassunto and forecasting combining elements of classical time series analysis. multivariate statistics, multivariate geometry, dynamical systems and signal processing. SSA seeks to decompose the original series into a sum of a small number of interpretable components such as trend. oscillatory components and noise. It is based on the singular value

decomposition of a specific matrix constructed upon the time series. Neither a parametric model nor stationarity are assumed for the time

series. This makes SSA a model-free method and hence enables SSA to have a very wide range of applicability. The present book is devoted to the methodology of SSA and shows how to use SSA both safely and with maximum effect. Potential readers of the book include: professional statisticians and econometricians, specialists in any discipline in which problems of time series analysis and forecasting occur, specialists in signal processing and those needed to extract signals from noisy data, and students taking courses on applied time series analysis.