

About the Book

There is a dearth of relevant books dealing with both theory and application of time series analysis techniques, particularly in the field of water resources engineering. Therefore many hydrogeologies face difficult in adopting time series analysis as one of the tools for their research. This book fills this gap by providing a proper blend of theoretical and practical aspects of time series analysis. It deals with a comprehensive overview of time series characteristics in hydrology/water resources engineering, various tools and techniques for analyzing time series data, theoretical details of 31 available statistical tests along with detailed procedures for applying them to real-world time series data, theory and methodology of stochastic modeling and current status of time series analysis in hydrological sciences. In addition, it demonstrates the application of most time series tests through a case study as well as presents a comparative performance evaluation of various time series tests, together with four invited studies from India and abroad.

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