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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Chapter 1: Computational intelligence techniques and applications -- Chapter 2: Vector Autoregression (VAR) Modeling and Forecasting on Temperature, Humidity and Cloud Coverage -- Chapter 3: Exploring the Behavior and Changing Trends of Rainfall and Temperature using Statistical Computing Techniques -- Chapter 4: Time Series Model Building and Forecasting on Maximum Temperature Data -- Chapter 5: GIS Visualization of Climate Change and Prediction of Human Responses. Chapter 6: Markov Chain Analysis of Weekly Rainfall Data for Predicting Agricultural Drought -- Chapter 7: Forecasting tropical cyclones in Bangladesh: a Markov renewal approach -- Chapter 8: Performance of Wavelet Transform on Models in Forecasting Climatic Variables -- Chapter 9: Analysis of Inter-annual Climate Variability Using Discrete Wavelet Transform -- Chapter 10: Modelling of suspended sediment concentration carried in natural streams using fuzzy-genetic approach -- Chapter 11: Prediction of local scour depth downstream of bed sills using soft computing models -- Chapter 12:

Evaluation of wavelet-based denoising approach in hydrological models linked to Artificial Neural Networks -- Chapter 13: Evaluation of Mathematical Models with utility Index: A Case Study from Hydrology.

Sommario/riassunto

Computational intelligence techniques have enjoyed growing interest in recent decades among the earth and environmental science research communities for their powerful ability to solve and understand various complex problems and develop novel approaches toward a sustainable earth. This book compiles a collection of recent developments and rigorous applications of computational intelligence in these disciplines. Techniques covered are divided into three categories - classical intelligence techniques, probabilistic and transforms intelligence techniques, and hybrid intelligence techniques. Further topics given treatment in this volume include meteorology, atmospheric modeling, climate change, water resources engineering, and hydrological modeling. By linking computational intelligence techniques with earth and environmental science oriented problems, this book promotes synergistic activities among scientists and technicians working in areas such as data mining and machine learning. We believe that a diverse group of academics, scientists, environmentalists, meteorologists, and computing experts with a common interest in computational intelligence techniques within the earth and environmental sciences will find this book to be of great value.
