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Descrizione fisica	1 online resource (260 pages)
Collana	Advances in Geographical and Environmental Sciences, , 2198-3550
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Nota di contenuto	Introduction of Geographic Information System -- Referencing and Coordinate Systems in GIS -- GIS Data Models -- Data Input in GIS -- Data Visualization and Output -- Spatial Data Analysis -- Non-spatial Data Management -- Applications of GIS in Urban Policy/Planning/Management -- Monitoring and Modelling of Urban Land Use Changes -- Simulating Future Urban Growth using Cellular Automata-Markov Chain Models -- Identification of Potential Sites for Housing Development Using GIS Based Multi-Criteria Evaluation Technique -- Urban Green Space Analysis and Potential Site Selection for Green Space Expansion -- A Multi-Criteria Decision Making for Alternative Landfill Site Selections Using Fuzzy TOPSIS Approach -- Urban Flood Susceptibility Modelling of Srinagar using Novel Fuzzy Multi-Layer Perceptron Neural Network (Fuzzy MLPNN) -- Assessment, Mapping and prediction of Urban Heat Island. .
Sommario/riassunto	Geographic Information Systems (GIS) play a pivotal role in the field of urban planning and management and provide better solutions for numerous urban problems. With GIS, one has the ability to better understand existing requirements of a city and its design to fulfill those needs. This book contributes to developing scientific knowledge based on geospatial technologies among planners, researchers, scientists, professionals, students, and laymen and providing them with better

understanding for urban planning and management at various levels. The book manifests the importance of GIS in better understanding of current urban challenges and provides new insights on how to apply GIS in urban planning. It also encourages the various stakeholders of society to participate in the decision-making process and assists planners and authorities to formulate suitable plans for sustainable urban growth of a region. The book is divided into two parts. The first part describes the fundamental concepts of GIS and also deals with the advanced techniques of spatial planning. The second part addresses real-world case studies using various applications of GIS. The case studies include urban land-use changes, simulation of future urban growth, urban heat island, alternate landfill site selection and urban flood susceptibility mapping, among others. This book shows how to integrate GIS with remote sensing, geostatistics, artificial intelligence-machine learning techniques, and other cutting-edge technologies. Readers find this book to be an invaluable resource for understanding and solving problems relating to sustainable urban planning and management.
