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Descrizione fisica	1 online resource (VIII, 209 p. 81 illus., 69 illus. in color.)
Collana	Springer Remote Sensing/Photogrammetry, , 2198-0721
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Soggetti	Remote sensing Environmental monitoring Hydrology Environmental management Remote Sensing/Photogrammetry Monitoring/Environmental Analysis Hydrology/Water Resources Water Policy/Water Governance/Water Management
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Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Chapter1. Methods, techniques and sensors for precision flood monitoring through remote sensing.-Chapter2. Remote sensing as a tool for analysing channel dynamics and geomorphic effects of floods -- Chapter3. The use of DEM-based approaches to derive a priori information on flood-prone areas -- Chapter4. River Flood Forecasting System: An Intedisciplinary Approach -- Chapter5. Monitoring flood extent and area through multi-sensor, multi-temporal remote sensing: the Strymonas (Greece) river flood -- Chapter6. Adaptive SAR image processing techniques to support flood monitoring from Earth Observation data -- Chapter7. -Flood Mapping in Vegetated and Urban Areas and other Challenges: Models and Methods -- Chapter8. Data fusion through Bayesian methods for flood monitoring from remotely sensed data.
Sommario/riassunto	This book is an overview of current state of the art about monitoring of inundation events through remote sensing. A complete approach to

efficient and precise flood monitoring requires multiple fields of expertise, from image processing to hydrologic monitoring. This volume details the latest remote sensing techniques for flood monitoring and mapping, including use of optical data from geostationary sensors and LEO spacecraft, synthetic aperture radar (SAR) data analysis, and data fusion. Detailed case studies from a variety of subject experts illustrate these tools and techniques. Accurate monitoring of flood events is increasingly necessary to gain insight about both causes and remedies. Floods are one of the most destructive hazards to the human populations, they can occur practically everywhere on the Earth surface, and each year cause considerable harm and damage to infrastructures. The recent Flood directive in European Countries is contributing to a more quantitative approach to flood hazard and risk evaluation. .