

Remote Sensing Journals List

This book is a printed edition of the Special Issue "Remote Sensing and Geospatial Technologies in Public Health" that was published in IJG

Satellite Remote Sensing of Natural Resources offers an introduction to digital remote sensing. This comprehensive text emphasizes the basics, with simple concepts presented in clear, easy-to-understand language. For those who are interested in practical remote sensing but do not have an extensive background in math and statistics, this primer is invaluable. The main topics covered include satellite images, image processing systems, spectral regions, radiometric and geometric corrections, supervised and unsupervised classification, and accuracy assessment. Each chapter concludes with a section of sample problems and list of additional readings.

Recent advances in the modeling and remote sensing of droughts and floods Droughts and floods are causing increasing damage worldwide, often with devastating short- and long-term impacts on human society. Forecasting when they will occur, monitoring them as they develop, and learning from the past to improve disaster management is vital. Global Drought and Flood: Observation, Modeling, and Prediction presents recent advances in the modeling and remote sensing of droughts and floods. It also describes the techniques and products currently available and how they are being used in practice. Volume highlights include: Remote sensing approaches for mapping droughts and floods Physical and statistical models for monitoring and forecasting hydrologic hazards Features of various drought and flood systems and products Use by governments, humanitarian, and development stakeholders in recent disaster cases Improving the collaboration between hazard information provision and end users The American Geophysical Union promotes discovery in Earth and space science for the benefit of humanity. Its publications disseminate scientific knowledge and provide resources for researchers, students, and professionals.

Information on recent progress in laser remote sensor (LIDAR) technology can be found scattered throughout numerous journal articles and conference proceedings, but until now there has been no work that summarizes recent advancements and achievements in the field in a detailed format. Laser Remote Sensing provides an up-to-date, comprehensive review on LIDAR, focusing mainly on applications to current topics in atmospheric science. The scope of the book includes laser remote sensing of the atmosphere, including measurement of aerosols, water vapor, clouds, winds, trace constituents, and temperature. It also covers other interesting applications such as vegetation monitoring and altimetry. LIDAR systems described in this volume include ground-based (fixed or mobile), airborne, and spaceborne (satellite-based) systems. The book emphasizes instrumentation and measurement techniques to enable the reader to understand what kind of a LIDAR system is necessary for a certain application. The individual chapters are self-contained and written by authors who are outstanding experts in each field. The book is intended for scientists, researchers, and students who have interest in the atmospheric environment and wish to learn about the measurement capabilities of state-of-the-art LIDAR systems

Remote Sensing of Natural Resources

A Scale Analysis

Remote Sensing of Hydrometeorological Hazards

Remote Sensing in Mangroves

Principles and Practices

Land Surface Remote Sensing: Environment and Risks explores the use of remote sensing in applications concerning the environment, including desertification and monitoring deforestation and forest fires. The first chapter covers the characterization of aerosols and gases by passive remote sensing. The next chapter presents the correlation of optical images for quantifying the deformation of the Earth's surface and geomorphological processes. The third chapter examines remote sensing applications in the mining environment. The fourth chapter depicts the strong potential of radar imagery for volcanology and urban and mining subsidence studies. The next two chapters deal respectively with the use of remote sensing in locust control and the contribution of remote sensing to the epidemiology of infectious diseases. In the last ten years, spatial observation of the Earth—particularly continental surfaces—has expanded considerably with the launch of increasing numbers of satellites covering various applications (hydrology, biosphere, flow of surface, snow, ice, landslide, floods). This has paved the way for an explosion in the use of remote sensing data. This book offers essential coverage of space-based observation techniques for continental surfaces. The authors explore major applications and provide a corresponding detailed chapter for the physical principles, physics of measurement, and data processing requirements for each technique, bringing you up-to-date descriptions of techniques used by leading scientists in the field of remote sensing and Earth observation. Provides clear and concise descriptions of modern remote sensing methods Explores the most current remote sensing techniques with physical aspects of the measurement (theory) and their applications Provides chapters on physical principles, measurement, and data processing for each technique described Describes optical remote sensing technology, including a description of acquisition systems and measurement corrections to be made

Advances in Agriculture Research and Application: 2011 Edition is a ScholarlyEditions™ eBook that delivers timely, authoritative, and comprehensive information about Agriculture. The editors have built Advances in Agriculture Research and Application: 2011 Edition on the vast information databases of ScholarlyNews.™ You can expect the information about Agriculture in this eBook to be deeper than what you can access anywhere else, as well as consistently reliable, authoritative, informed, and relevant. The content of Advances in Agriculture Research and Application: 2011 Edition has been produced by the world's leading scientists, engineers, analysts, research institutions, and companies. All of the content is from peer-reviewed sources, and all of it is written, assembled, and edited by the editors at ScholarlyEditions™ and available exclusively from us. You now have a source you can cite with authority, confidence, and credibility. More information is available at http://www.ScholarlyEditions.com/.

Extreme weather and climate change aggravate the frequency and magnitude of disasters. Facing atypical and more severe events, existing early warning and response systems become inadequate both in scale and scope. Earth Observation (EO) provides today information at global, regional and even basin scales related to agrometeorological hazards. This book focuses on drought, flood, frost, landslides, and storms/cyclones and covers different applications of EO data used from prediction to mapping damages as well as recovery for each category. It explains the added value of EO technology in comparison with conventional techniques applied today through many case studies.

Hyperspectral narrow-band (or imaging spectroscopy) spectral data are fast emerging as practical solutions in modeling and mapping vegetation. Recent research has demonstrated the advances in and merit of hyperspectral data in a range of applications including quantifying agricultural crops, modeling forest canopy biochemical properties, detecting crop stress and disease, mapping leaf chlorophyll content as it influences crop production, identifying plants affected by contaminants such as arsenic, demonstrating sensitivity to plant nitrogen content, classifying vegetation species and type, characterizing wetlands, and mapping invasive species. The need for significant improvements in quantifying, modeling, and mapping plant chemical, physical, and water properties is more critical than ever before to reduce uncertainties in our understanding of the Earth and to better sustain it. There is also a need for a synthesis of the vast knowledge spread throughout the literature from more than 40 years of research. Hyperspectral Remote Sensing of Vegetation integrates this knowledge, guiding readers to harness the capabilities of the most recent advances in applying hyperspectral remote sensing technology to the study of terrestrial vegetation. Taking a practical approach to a complex subject, the book demonstrates the experience, utility, methods and models used in studying vegetation using hyperspectral data. Written by leading experts, including pioneers in the field, each chapter presents specific applications, reviews existing state-of-the-art knowledge, highlights the advances made, and provides guidance for the appropriate use of hyperspectral data in the study of vegetation as well as its numerous applications, such as crop yield modeling, crop and vegetation biophysical and biochemical property characterization, and crop moisture assessment. This comprehensive book brings together the best global expertise on hyperspectral remote sensing of agriculture, crop water use, plant species detection, vegetation classification, biophysical and biochemical modeling, crop productivity and water productivity mapping, and modeling. It provides the pertinent facts, synthesizing findings so that readers can get the correct picture on issues such as the best wavebands for their practical applications, methods of analysis using whole spectra, hyperspectral vegetation indices targeted to study specific biophysical and biochemical quantities, and methods for detecting parameters such as crop moisture variability, chlorophyll content, and stress levels. A collective "knowledge bank," it guides professionals to adopt the best practices for their own work.

Remote Sensing of Environment

Image Processing and GIS for Remote Sensing

Advances in Mapping from Remote Sensor Imagery

Asian-Pacific Remote Sensing Journal

Final Report

Techniques and Applications

An authoritative and state-of-the-art book bringing together some of the most recent developments in remote sensing and GIS analysis with a particular emphasis on mathematical techniques and their applications. With contributions from academia, industry and research institutes, all with a high standing, this book covers a range of techniques including: fuzzy classification, artificial neural networks, geostatistical techniques (such as kriging, cokriging, stochastic simulation and regularization, texture classification, fractals, per-parcel classification, raster and vector data integration and process modelling. The range of applications includes land cover and land use mapping, cloud tracking, snow cover mapping and air temperature monitoring, topographic mapping, geological classification and soil erosion modelling. This book will be valuable to both researchers and advanced students of remote sensing and GIS. It contains several new approaches, recent developments, and novel applications of existing techniques. Most chapters report the results of experiment and investigation. Some chapters form broad reviews of recent developments in the field. In all cases, the mathematical basis is fully explained.

International Journal of Advanced Remote Sensing and GIS (IJARSG, ISSN 2320 – 0243) is an open-access peer-reviewed scholarly journal publishes original research papers, reviews, case study, case reports, and methodology articles in all aspects of Remote Sensing and GIS including associated fields. This Journal commits to working for quality and transparency in its publishing by following standard Publication Ethics and Policies.

Highlighting new technologies, Remote Sensing of Natural Resources explores advanced remote sensing systems and algorithms for image processing, enhancement, feature extraction, data fusion, image classification, image-based modeling, image-based sampling design, map accuracy assessment and quality control. It also discusses their applications for The Elements of Style William Strunk concentrated on specific questions of usage—and the cultivation of good writing—with the recommendation "Make every word tell"; hence the 17th principle of composition is the simple instruction: "Omit needless words." The book was also listed as one of the 100 best and most influential books written in English since

1923 by Time in its 2011 list.

A Foundation for the Future

Optical and Laser Remote Sensing

Proceedings of the 1st Springer Conference of the Arabian Journal of Geosciences (CAJG-1), Tunisia 2018

Advances in Remote Sensing and Geo Informatics Applications

Environmental Remote Sensing and Systems Analysis

Monitoring, Prediction, and Adaptation

This unique book focuses on remote sensing (RS) and geographical information systems (GIS) in Iraq. The environmental applications include monitoring and mapping soil salinity and prediction of soil properties, monitoring and mapping of land threats, proximal sensing for soil monitoring and soil fertility, spatiotemporal land use/cover, agricultural drought monitoring, hydrological applications including spatial rainfall distribution, surface runoff and drought control, geo-morphic analysis and flood simulation, hydrologic modelling and the effective management of water resources. Also, this book assesses the impacts of climate change on natural resources using both RS and GIS, as well as other applications, covering different parts of Iraq. The book chapters include tens of maps extracted from the remotely sensed datasets, in addition to tables and statistical relations obtained from the results of the studies of the chapters' authors. These studies have been conducted in different parts of Iraq; in the north (Kurdistan region) with its mountainous and undulating lands, in western parts which have desert soils, and in central and southern Iraq where there are salty soils, dunes, wetlands, and marshes. The book is written by distinguished scientists from Iraq, China, USA, Italy, Iran, Germany, and the Czech Republic who are interested in the Iraqi environment. The book is therefore a useful source of information and knowledge on Iraqi environment for graduate students, researchers, policy planners, and stakeholders in Iraq as well as similar regions.

Quantitative Remote Sensing of Land SurfacesJohn Wiley & Sons

This new Encyclopedia of Coastal Science stands as the latest authoritative source in the field of coastal studies, making it the standard reference work for specialists and the interested lay person. Unique in its interdisciplinary approach. This Encyclopedia features contributions by 245 well-known international specialists in their respective fields and is abundantly illustrated with line-drawings and photographs. Not only does this volume offer an extensive number of entries, it also includes various appendices, an illustrated glossary of coastal morphology and extensive bibliographic listings.

A magnificent achievement. A who's who of contemporary remote sensing have produced an engaging, wide-ranging and scholarly review of the field in just one volume — Professor Paul Curran, Vice-Chancellor, Bournemouth University Remote Sensing acquires and interprets small or large-scale data about the Earth from a distance. Using a wide range of spatial, spectral, temporal, and radiometric scales Remote Sensing is a large and diverse field for which this Handbook will be the key research reference. Organized in four key sections: • Interactions of Electromagnetic Radiation with the Terrestrial Environment: chapters on Visible, Near-IR and Shortwave IR; Middle IR (3-5 micrometers); Thermal IR • Microwave • Digital sensors and Image Characteristics: chapters on Sensor Technology, Coarse Spatial Resolution Optical Sensors • Medium Spatial Resolution Optical Sensors; Fine Spatial Resolution Optical Sensors; Video Imaging and Multispectral Digital Photography; Hyperspectral Sensors; Radar and Passive Microwave Sensors; Lidar • Remote Sensing Analysis - Design and Implementation: chapters on Image Pre-Processing; Ground Data Collection; Integration with GIS; Quantitative Models in Remote Sensing; Validation and accuracy assessment • Remote Sensing Analysis - Applications: LITHOSPHERIC SCIENCES: chapters on Topography; Geology; Soils; PLANT SCIENCES: Vegetation; Agriculture; HYDROSPHERIC and CRYOSPHERIC SCIENCES: Hydrosphere: Fresh and Ocean Water; Cryosphere; GLOBAL CHANGE AND HUMAN ENVIRONMENTS: Earth Systems; Human Environments & Links to the Social Sciences; Real Time Monitoring Systems and Disaster Management;

Land Cover Change Illustrated throughout, an essential resource for the analysis of remotely sensed data, the SAGE Handbook of Remote Sensing provides researchers with a definitive statement of the core concepts and methodologies in the discipline.

Introduction to Remote Sensing

Remote Sensing Applications as a Research and Management Tool

Global Drought and Flood

Remote Sensing and Geospatial Technologies in Public Health

Concepts and Case Studies

Congo Basin Hydrology, Climate, and Biogeochemistry

This comprehensive introductory text presents a timely overview of the most widely used forms of remote sensing imagery and their applications in plant sciences, hydrology, earth sciences, and land-use analysis.

Table of contents

Following the successful publication of the 1st edition in 2009, the 2nd edition maintains its aim to provide an application-driven package of essential techniques in image processing and GIS, together with case studies for demonstration and guidance in remote sensing applications. The book therefore has a "3 in 1" structure which pinpoints the intersection between these three individual disciplines and successfully draws them together in a balanced and comprehensive manner. The book conveys in-depth knowledge of image processing and GIS techniques in an accessible and comprehensive manner, with clear explanations and conceptual illustrations used throughout to enhance student learning. The understanding of key concepts is always emphasised with minimal assumption of prior mathematical experience. The book is heavily based on the authors' own research. Many of the author-designed image processing techniques are popular around the world. For instance, the SFIM technique has long been adopted by ASTRUM for mass-production of their standard "Pan-sharpen" imagery data. The new edition also includes a completely new chapter on subpixel technology and new case studies, based on their recent research.

Advances in Mapping from Remote Sensor Imagery: Techniques and Applications reviews some of the latest developments in remote sensing and information extraction techniques applicable to topographic and thematic mapping. Providing an interdisciplinary perspective, leading experts from around the world have contributed chapters examining state-of-the-

Remote Sensing

Laser Remote Sensing

Remote Sensing of Forest Environments

Advances in Remote Sensing and GIS Analysis

Environmental Remote Sensing and GIS in Iraq

Quantitative Remote Sensing of Land Surfaces

International Trends in Optics provides a broad view of work in the field of optics throughout the world. Topics range from quantum optoelectronics for optical processing to optics in telecommunications, along with microoptics, optical memories, and fiber-optic signal processing. Holographic optical elements for use with semiconductor lasers are also considered. Comprised of 34 chapters, this book begins with an introduction to some of the practical applications of integrated optical circuits, optoelectronic integrated circuits, and photonic integrated circuits. Subsequent chapters deal with quantum optoelectronics for optical processing; fiber-optic signal processing; holographic optical elements for use with semiconductor lasers; potential uses of photorefractives; and adaptive interferometry that makes use of photorefractive crystals. Water wave optics and diffraction are also examined, together with the essential journals of optics and the opposition effect in volume and surface scattering. The final chapter is devoted to optical computing, with emphasis on its processing functions and architecture. This monograph will be of interest to students, practitioners, and researchers in physics and electronics.

Satellite images acquired at night provide a visually arresting perspective of the Earth and the human activities that light up the otherwise mostly dark Earth. These night-time light satellite images can be compiled into a geospatial time series that represent an invaluable source of information for both the natural and social sciences. Night-time light remote sensing has been shown to be particularly useful for a range of natural science and social science applications, including studies related to urban development, demography, sociology, fishing activity, light pollution and the consequences of civil war. Key sensors for these time-series include the Defense Meteorological Satellite Program's Operational Linescan System (DMS/OLS) and the Suomi National Polar-orbiting Partnership Satellite's Visible Infrared Imaging Radiometer Suite Day/Night Band (Suomi NPP/VIIRS DNB). An increasing number of alternative sources are also available, including high spatial resolution and multispectral sensors. This book captures key methodological issues associated with pre-processing night-time light data, documents state of the art analysis methods, and explores a wide range of applications. Major sections focus on NPP/VIIRS DNB processing; inter-calibration between NPP/VIIRS and DMS/OLS; applications associated with socio-economic activities, applications in monitoring urbanization; and fishing activity monitoring. The chapters in this book were originally published as a special issue of the International Journal of Remote Sensing.

The book highlights recent advancements in the mapping and monitoring of mangrove forests using earth observation satellite data. New and historical satellite data and aerial photographs have been used to map the extent, change and bio-physical parameters, such as phenology and biomass. Research was conducted in different parts of the world. Knowledge and understanding gained from this book can be used for the sustainable management of mangrove forests of the world

New scientific discoveries in the Congo Basin as a result of international collaborations The Congo is the world's second largest river basin and home to 120 million people. Understanding the cycling of water, sediments, and nutrients is important as the region faces climatic and anthropogenic change. Congo Basin Hydrology, Climate, and Biogeochemistry: A Foundation for the Future explores variations in and influences on

hydrology and hydrology, and sediment and carbon dynamics. It features case studies in the region and their international collaborators. Volume highlights include: New in situ and remotely sensed measurements and model results Use of historic data to assess precipitation and hydrologic changes Exploration of water exchange between wetlands and rivers Biogeochemical processes in the Congo's forests and wetlands A scientific foundation for hydrologic resource management in the region Studies from different parts of the Congo river and its adjoining basins This book is available in English and French. The American Geophysical Union promotes discovery in Earth and space science for the benefit of humanity. Its publications disseminate scientific knowledge and provide resources for researchers, students, and professionals.

The Elements of Style

Remote Sensing Techniques and GIS Applications in Earth and Environmental Studies

Encyclopedia of Library and Information Sciences

Compilation from Volume 1 to Volume 9

Spatial Decision Support Systems

Principles and Applications, Third Edition

Published on the occasion of the XXIst Congress of the International Society for Photogrammetry and Remote Sensing (ISPRS) in Beijing, China in 2008, Advances in Photogrammetry, Remote Sensing and Spatial Information Sciences: 2008 ISPRS Congress Book is a compilation of 34 contributions from 62 researchers active within the ISPRS. The book covers

Processing the vast amounts of data on the Earth's land surface environment generated by NASA's and other international satellite programs is a significant challenge. Filling a gap between the theoretical, physically-based modelling and specific applications, this in-depth study presents practical quantitative algorithms for estimating various land surface variables from remotely sensed observations. A concise review of the basic principles of optical remote sensing as well as practical algorithms for estimating land surface variables quantitatively from remotely sensed observations. Emphasizes both the basic principles of optical remote sensing and practical algorithms for estimating land surface variables quantitatively from remotely sensed observations Presents the current physical understanding of remote sensing as a system with a focus on radiative transfer modelling of the atmosphere, canopy, soil and snow Gathers the state of the art quantitative algorithms for sensor calibration, atmospheric and topographic correction, estimation of a variety of biophysical and geoph ysical variables, and four-dimensional data assimilation

Comprehensive Remote Sensing covers all aspects of the topic, with each volume edited by well-known scientists and contributed to by frontier researchers. It is a comprehensive resource that will benefit both students and researchers who want to further their understanding in this discipline. The field of remote sensing has quadrupled in size in the past two decades, and increasingly draws in individuals working in a diverse set of disciplines ranging from geographers, oceanographers, and meteorologists, to physicists and computer scientists. Researchers from a variety of backgrounds are now accessing remote sensing data, creating an urgent need for a one-stop reference work that can comprehensively document the development of remote sensing, from the basic principles, modeling and practical algorithms, to various applications. Fully comprehensive coverage of this rapidly growing discipline, giving readers a detailed overview of all aspects of Remote Sensing, the principles and applications Contains "layered content", with each article beginning with the basics and then moving on to more complex concepts Ideal for advanced undergraduates and academic researchers Includes case studies that illustrate the practical application of remote sensing principles, further enhancing understanding

Although interest in Spatial Decision Support Systems (SDSS) continues to grow rapidly in a wide range of disciplines, students, planners, managers, and the research community have lacked a book that covers the fundamentals of SDSS along with the advanced design concepts required for building SDSS. Filling this need, Spatial Decision Support Systems: Principles and Practices provides a comprehensive examination of the various aspects of SDSS evolution, components, architecture, and implementation. It integrates research from a variety of disciplines, including the geosciences, to supply a complete overview of SDSS technologies and their application from an interdisciplinary perspective. This groundbreaking reference provides thorough coverage of the roots of SDSS. It explains the core principles of SDSS, how to use them in various decision making contexts, and how to design and develop them using readily available enabling technologies and commercial tools. The book consists of four major parts, each addressing different topic areas in SDSS: Presents an introduction to SDSS and the evolution of SDSS covers the essential and optional components of SDSS Focuses on the design and implementation of SDSS Reviews SDSS applications from various domains and disciplines—investigating current challenges and future directions The text includes numerous detailed case studies, example applications, and methods for tailoring SDSS to your work environment. It also integrates sample code segments throughout. Addressing the technical and organizational challenges that affect the success or failure of SDSS, the book concludes by considering future directions of this rapidly emerging field of study.

Advances in Agriculture Research and Application: 2011 Edition

Land Surface Remote Sensing

Hyperspectral Remote Sensing of Vegetation

Information Processing for Remote Sensing

International Trends in Optics

Hearing Before the Committee on Science, Subcommittee on Basic Research, U.S. House of Representatives, One Hundred Fifth Congress, Second Session, September 26, 1998

The field of optical and laser remote sensing has grown rapidly in recent years. This dynamic growth has been stimulated not only by technological advances in lasers, detectors, and optical system design, but also by the potential application of remote sensing systems to a wide variety of atmospheric measurements. Optical and laser remote sensing can allow single ended measurement capability not offered by conventional point-detection techniques. While many past measurements have been associated with laboratory research, practical systems have recently been developed which are capable of remotely detecting, measuring, and tracking a wide range of molecular and atomic species in the atmosphere with concentrations of parts per billion and at ranges over 100 km. This book is a compilation of papers which represent an overview of the present state of development of optical and laser remote sensing technology. The subjects covered include both passive and active remote sensing techniques in the UV, visible, and IR spectral regions. related laser and detector technology, and atmospheric propagation and system analysis considerations. While the papers do not constitute an exhaustive treatment of the excellent research being conducted in this field, they are representative of the wide diversity of present efforts. It is hoped that the reader will gain a general understanding of the current research in optical and laser remote sensing as well as an overview of current systems development.

A basic reference for those considering digital imagery, particularly satellite imagery for vegetation mapping. Contents: using remote sensing and GIS for mapping vegetation; remote sensors and remotely sensed data; determining appropriate uses for satellite imagery; defining the classification scheme; collecting reference data; assessing accuracy; creating polygons; project management; the basic tour; and case studies. Important terms and ideas are introduced while showing the progression of key activities in the classification and mapping process.

Designed for an introductory course in remote sensing, this highly regarded text offers 28 pages with color photos, Sabins trademark clarity, and comprehensive coverage. The first chapter vividly introduces the major remote sensing systems and the interactions between electromagnetic energy and materials that are the basis for remote sensing. Six following chapters describe the major imaging systems. After a digital image-processing chapter, Sabins devotes the rest of the text to descriptions of practical applications of remote sensing to environmental monitoring, oil and mineral exploration, land-use and geographic information systems, and natural hazards.

Using a systems analysis approach and extensive case studies, Environmental Remote Sensing and Systems Analysis shows how remote sensing can be used to support environmental decision making. It presents a multidisciplinary framework and the latest remote sensing tools to understand environmental impacts, management complexity, and policy implications

Guidelines for the Use of Digital Imagery for Vegetation Mapping

The SAGE Handbook of Remote Sensing

Remote Sensing and Hydrologic Modeling of Arid Watersheds

Satellite Remote Sensing of Natural Resources

Advances in Photogrammetry, Remote Sensing and Spatial Information Sciences: 2008 ISPRS Congress Book

Environment and Risks

The Encyclopedia of Library and Information Sciences, comprising of seven volumes, now in its fourth edition, compiles the contributions of major researchers and practitioners and explores the cultural institutions of more than 30 countries. This major reference presents over 550 entries extensively reviewed for accuracy in seven print volumes or online. The new fourth edition, which includes 55 new entries and 60 revised entries, continues to reflect the growing convergence among the disciplines that influence information and the cultural record, with coverage of the latest topics as well as classic articles of historical and theoretical importance.

This book provides the most comprehensive study of information processing techniques and issues in remote sensing. Topics covered include image and signal processing, pattern recognition and feature extraction for remote sensing, neural networks and wavelet transforms in remote sensing, remote sensing of ocean and coastal environment, SAR image filtering and segmentation, knowledge-based systems, software and hardware issues, data compression, change detection, etc. Emphasis is placed on environmental issues of remote sensing. With 58 color illustrations.

Emerging technologies have enhanced the various uses of geographic information systems. This allows for more effective analysis of available data to optimize resources and promote sustainability. Remote Sensing Techniques and GIS Applications in Earth and Environmental Studies is a critical reference source for the latest research on innovative methods for analyzing geographic data and utilizing sensor technologies for environmental monitoring. Featuring extensive coverage across a range of relevant perspectives and topics, such as land use, geospatial analysis, image interpretation, and site-suitability analysis, this book is ideally designed for engineers, professionals, practitioners, upper-level students, and academics actively involved in the various areas of environmental sciences.

This edited volume is based on the best papers accepted for presentation during the 1st Springer Conference of the Arabian Journal of Geosciences (CAJG-1), Tunisia 2018. The book compiles a wide range of topics addressing various issues by experienced researchers mainly from research institutes in the Mediterranean, MENA region, North America and Asia. Remote sensing observations can close gaps in information scarcity by complementing ground-based sparse data. Spatial, spectral, temporal and radiometric characteristics of satellites sensors are most suitable for features identification. The local to global nature and broad spatial scale of remote sensing with the wide range of spectral coverage are essential characteristics, which make satellites an ideal platform for mapping, observation, monitoring, assessing and providing necessary mitigation measures and control for different related Earth's systems processes. Main topics in this book include: Geo-informatics Applications, Land Use / Land Cover Mapping and Change Detection, Emerging Remote Sensing Applications, Rock Formations / Soil Lithology Mapping, Vegetation Mapping Impact and Assessment, Natural Hazards Mapping and Assessment, Ground Water Mapping and Assessment, Coastal Management of Marine Environment and Atmospheric Sensing.

Remote Sensing of Night-time Light

Comprehensive Remote Sensing

Encyclopedia of Coastal Science

International Journal of Advanced Remote Sensing and GIS