

Geographic Perspectives on Disaster Risk Management

Chris Ewing (Editor), Matthew Foote (Editor), William Forde (Editor), Tina Thomson (Editor)

ISBN: 978-1-119-75144-1

June 2026

464 pages

2450 Kč

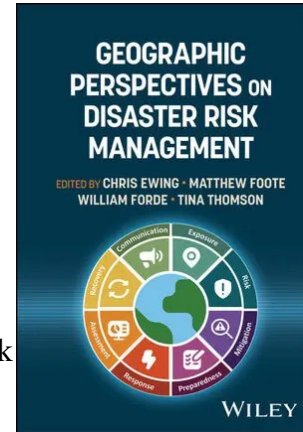
A holistic view of geospatial data and analysis across the risk management lifecycle

Geospatial data and analytical tools are widely used for disaster management, insurance, humanitarian response, and defence—yet methodologies remain siloed. *Geographic Perspectives on Disaster Risk Management*, written by a team of experienced practitioners in catastrophe risk analytics and geospatial studies, connects these sectors by comparing approaches, identifying common challenges, and distilling cross-sector best practices for preparation, response, recovery, and mitigation.

Structured around the disaster risk cycle, the book addresses exposure and vulnerability mapping, risk preparedness and mitigation strategies, event monitoring, damage assessment, resilience building, and risk communication. It draws on data sources ranging from local traffic cameras to geostationary satellites and includes case studies illustrating real-world applications alongside outcome-based evaluations of current practices and future developments in disaster risk assessment.

Readers will also find:

- Cross-sector comparison of methodologies from international development, emergency response, insurance, defence, and commercial geospatial analytics
- Practical case studies demonstrating real-world challenges and solutions in disaster preparation, monitoring, damage assessment, and recovery operations



- Outcome-based evaluation of common approaches to emergency risk management, identifying strengths and limitations of current practice
- Coverage of future developments in data availability, analytical techniques, and climate risk assessment relevant to evolving environmental uncertainty
- Guidance on risk communication and decision-making frameworks that translate geospatial analysis into actionable operational and financial strategies

Designed for professionals in disaster management, emergency response, and the insurance industry, as well as researchers and advanced students in the geosciences, this book provides a structured, practice-oriented resource for applying geographic perspectives to quantify, communicate, and reduce disaster risk across sectors.

Reading's Sedimentary Environments: Processes, Facies and Stratigraphy, 4th Edition

Bruce Levell (Editor)

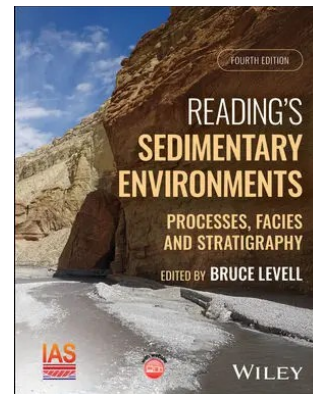
ISBN: 978-1-119-73983-8

May 2026

1392 pages

4395 Kč

An all-new edition of one of the most influential books in the earth sciences, endorsed by the International Association of Sedimentologists



Richly illustrated with hundreds of new images, this is a completely new edition of the well-known classic text Reading's Sedimentary Environments: Processes, Facies and Stratigraphy. The book again delivers an objective, thorough overview of the different ways in which sedimentary rocks are best described and interpreted via an understanding of sedimentary process using facies analysis. Throughout, this fourth edition covers the most recent work on sedimentary facies, processes and environments as well as the dynamics of stratigraphy, especially with respect to understanding preservation, extreme events, climate, tectonics and sea-level change. It includes extensive illustrations of the resulting 3D geometries using seismic imagery as well as outcrop and core data.

The main part of the book comprises specific chapters for each important depositional environment, from terrestrial to coastal and deep sea settings. Each chapter can be used independently, as each provides a standalone discussion of how to reconstruct a particular sedimentary environment through facies analysis of rock successions, cores, or in some cases, seismic data or vertical petrophysical log profiles.

New content in this edition covers:

- An overview of diverse methodologies of facies analysis and environmental reconstruction, including landscape system approaches, illustrated by extensive case studies

- Biogenic sedimentary structures, their formational processes and use in facies analysis
- A discussion of sequence stratigraphy methodology and the biases produced by the preservation filter on the sedimentary record
- Extraterrestrial sedimentology as illustrated by the sedimentary facies of Mars, the moons of Jupiter, and other solar system bodies
- Research directions and current developments in line with broad approaches to Earth Systems Science

Reading's Sedimentary Environments is a valuable learning resource for advanced undergraduate and postgraduate students, researchers and professionals in earth sciences, in particular geology, geochemistry, oceanography, and geoenvironment. This book is endorsed and supported by the International Association of Sedimentologists (IAS), the premier professional organization in the field.

Introduction to Geobiology

Xingliang Zhang, Zisheng Guo, Wei Liu, Ruliang He, Luoyang Li, Weiduo Hao

ISBN: 978-1-394-34619-6

April 2026

448 pages

2939 Kč

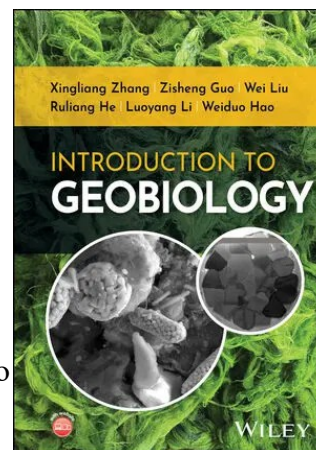
An introduction to how life has colonized and shaped the Earth, turning it into the habitable planet of today

Exploring the geological basis for life on Earth, Introduction to Geobiology systematically examines the interaction between the geosphere and the biosphere, including its evolutionary history.

In this didactically written text, readers will learn about the various modes of interaction between living and inorganic environments, emphasizing the geological significance of metabolism and the basis of life in extreme environments, the geobiological role and geological record of microbial ecosystems, and the material and energy cycles between the geosphere and the biosphere. The book also explores geological imprint of biological processes such as biomineralization, biosedimentation, and biological weathering of minerals and rocks, as well as the co-evolution process between organisms and the environment.

Based on a highly successful course taught by the authors for more than 20 years, Introduction to Geobiology includes information on:

- Domains and kingdoms of cellular life, classification of organisms according to their metabolism
- Ecological and metabolic diversity in marine and terrestrial environments, including extreme environments



- Using microbial ecosystems as a model for exploring life beyond earth
- Oxygen, carbon, nitrogen, sulfur, phosphorus, and iron cycles
- Biosedimentation investigating biological processes in making rocks
- Bioerosion, macroborers and microborers, biological and lichen weathering, and soil development

Introduction to Geobiology is an excellent textbook for senior undergraduate and graduate students in geology or microbiology seeking to learn about geobiology and the origin of life on Earth. It also provides a strong foundation for the study of astrobiology: the conditions under which life on other planets may develop.

Rare Earth Elements Essential Materials for Energy and Sustainable Development

Edited By Vipin Kumar Sharma, Mohamed Arezki Mellal
Copyright 2026

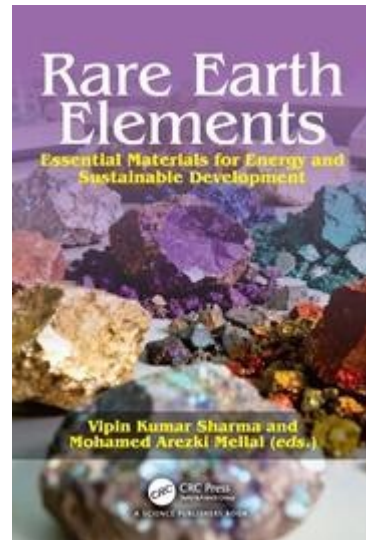
ISBN 9781041108085

254 Pages 15 Color & 22 B/W Illustrations

Published May 19, 2026 by CRC Press

3198 Kč

This book explores the scientific and technological relevance of rare earth elements in energy and sustainability. It covers their roles in clean energy systems, including electric vehicles, wind turbines, and energy storage. Emphasis is placed on material properties, extraction processes, and sector-specific applications. The book also discusses market trends, environmental concerns, and supply chain issues, making it valuable for researchers, students, and professionals in energy and materials science fields. This book explores the vital role of rare earth elements in driving clean energy and sustainable development. Covering topics from mining impacts and global resource distribution to applications in wind energy, solar power, batteries, electric vehicles, and fuel cells, it provides a comprehensive overview of current and emerging technologies. It also examines recycling methods, the circular economy, and potential alternatives to rare earths. Designed for researchers, engineers, and students, the book offers both foundational insights and forward-looking perspectives on rare earth applications in the evolving energy landscape. This book is applicable across various industries, including production, design engineering, automotive, aviation, and defense. It supports researchers in these fields by highlighting the role of rare earth elements in enhancing battery performance, improving energy efficiency, and advancing sustainable technologies such as electric vehicles, wind turbines, and energy storage systems.



Geology and Natural Resources of Nigeria

Edited By Silas S. Dada, Samuel B. Olobaniyi, Kamaldeen O.L Omosanya

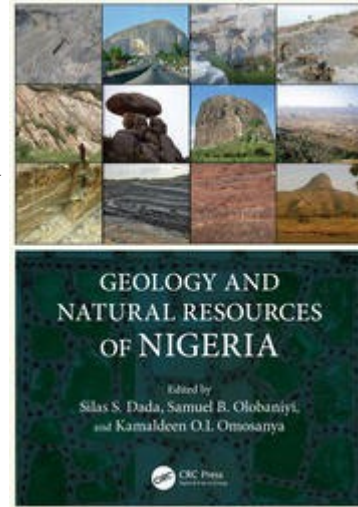
ISBN 9781032594866

579 Pages 239 Color & 54 B/W Illustrations

Published May 22, 2026 by CRC Press

1865 Kč

Geology and Natural Resources of Nigeria is an up-to-date and comprehensive overview of the geological framework of the continental crust of Nigeria, its evolution, and the natural resources it holds. It covers a wide set of topics and provides a detailed description of the rock units of the Nigerian continental crust, their geological settings and structural characteristics, and the potential of their mineral, energy, and water resources. The book discusses the impact of geo-resources on the Nigerian economy, includes recommendations on how to fully exploit geo-resources, and explains how to prevent geological processes that could lead to natural hazards.



FEATURES

- Provides different aspects of the Nigerian continental crust from a multidisciplinary approach
- Draws on the latest findings in geoscience research to present new insights and perspectives into the development and resource potential of the Nigerian continental crust
- Includes multiple case studies to illustrate the exploration and evaluation of the geological resources of Nigeria
- Explores the potential of geological resources for economic and industrial development
- Presents scientific achievements of authors and researchers from various disciplines and provides recommendations for mitigating natural hazards

This handbook is intended for industry professionals, academics, researchers, and students studying earth sciences with a special interest in Africa and learning how its geology impacts the natural resources and overall economy of the continent.

Environmental Geocomputation with R

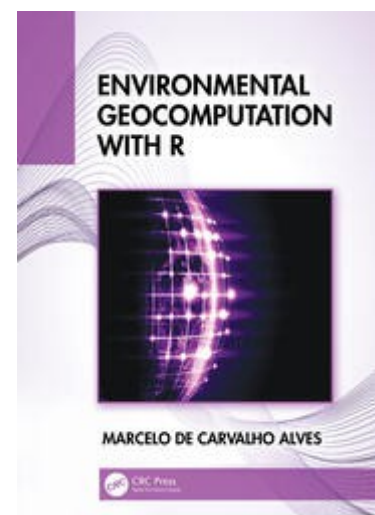
By Marcelo de Carvalho Alves

ISBN 9781041208181

570 Pages 184 Color & 121 B/W Illustrations

July 29, 2026 by CRC Press

2985 Kč



Environmental Geocomputation with R presents theoretical and practical principles for geospatial data analysis, visualization, and modeling, covering both the individual object approach and the continuous field approach. The book addresses spatial data uncertainties and error management while integrating spatial context into analytical results for better understanding of the environment. It progressively builds complexity enabling readers to develop geocomputational projects in real world using algorithms and big data with R and its packages. The applications are focused on environmental and agricultural analyses, helping to incorporate spatial-temporal dimensions into decision-making processes.

Features

- Explains the theory and applications of geocomputational methods for solving environmental problems involving spatial data and analysis.
- Covers big data, machine learning, methods for pattern recognition in spatial data, and tools and data analytics in the free and open-source (FOSS) R platform, making them accessible to everyone.
- Includes case studies from different environments and explains the diversity of big data and its applications.
- Provides hands-on exercises at the end of each chapter and encourages readers to understand both the potential and limitations of environmental systems.
- Supplemented by a comprehensive laboratory manual with solved exercises, homework assignments, and research suggestions in geocomputation within an environmental science context.

This textbook is intended for students in upper-level undergraduate or graduate programs using GIS, geocomputation, geoprocessing in environmental sciences and engineering, surveying, geosciences, and agriculture engineering. It is also an excellent resource for professionals in different areas who use geocomputation and image processing and wish to develop their skillset in these areas.

Laboratory Manual for Environmental Geocomputation with R

By Marcelo de Carvalho Alves

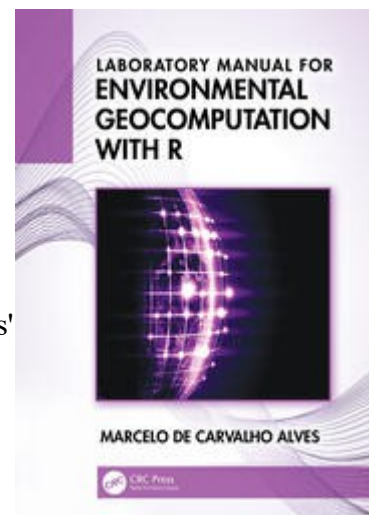
ISBN 9781041208211

320 Pages 93 Color & 33 B/W Illustrations

July 29, 2026 by CRC Press

1590 Kč

This Laboratory Manual complements the textbook Environmental Geocomputation with R, featuring practical applications for natural resource data analysis through hands-on exercises and case studies using the open-source R platform. Its structured workflow enhances students' understanding of scientific approaches to each case study, teaching them to replicate, adapt, and expand methodologies with new data sets, models, and research areas. Designed for both undergraduate and graduate students in environmental, agricultural, and social sciences, Laboratory Manual for



Environmental Geocomputation with R provides a comprehensive foundation in computational environmental analysis while developing transferable skills in data manipulation and visualization.

Features

- Aims to expand theoretical approaches of environmental geocomputation through multidisciplinary applications using R and R packages.
- Engages students in learning theory through hands-on real-life projects.
- All chapters are structured with solved exercises and homework and encourage readers to understand the potential and the limitations of the environments.
- Covers data analysis in free and open-source (FOSS) R platform, which makes geocomputation accessible to anyone with a computer.
- Explores current trends and developments in geocomputation in homework assignments with CBERS-4A, GADM, WorldClim, ESA WorldCover, SRTM, GEE, climate change CMIP6 models, Black Marble, AppEEARS, GPW UN-adjusted Population, MODIS, OpenStreetMap, and COVID-19 data to further explore the use of free applications and geoprocessing concerns.

The Laboratory Manual is intended for students in upper-level undergraduate or graduate programs using GIS, geocomputation, geoprocessing in environmental sciences and engineering, surveying, geosciences, and agriculture engineering. It is also an excellent resource for professionals in different areas who use geocomputation and image processing and wish to develop their skillset in these areas.

Geology of Connemara in Western Ireland

Unravelling the Region's Tectonic, Metamorphic, and Magmatic Histories

By Martin Feely

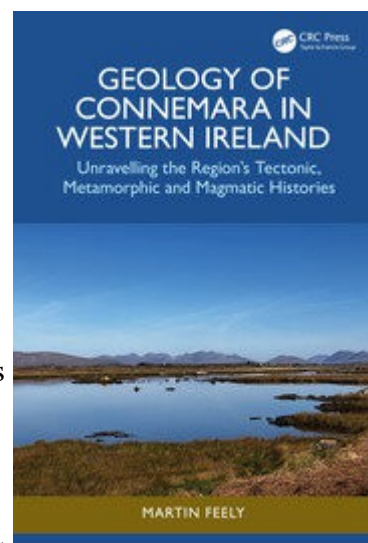
ISBN 9781032698427

186 Pages 100 Color & 12 B/W Illustrations

July 20, 2026 by CRC Press

1449 Kč

The Connemara region in Western Ireland is world-renowned for its outstanding geology that is blended with spectacular landscapes. This book and its many colourful illustrations, maps, diagrams, field and landscape images detail the origin and formation of Connemara's metamorphic and igneous rocks in deep time from 700 to 380 million years ago. It combines many field geology observations and current research results, and describes the many geological processes involved in the formation of the bedrock foundations of Connemara: plate tectonics, granite magmatism, deformation, metamorphism and mineral deposits. An amazing book for students and geological societies that visit the region annually.



Features

- The only book available on the formation of the igneous and metamorphic rock complexes in Connemara
- Explores the regional geological context of Connemara from ~700 Ma to 385 Ma
- Incorporates the most up-to-date research results and many useful field images, maps and schematic diagrams for teacher and student alike
- Describes the deformation, metamorphic and magmatic histories in Pressure-Temperature-time (PTt) space
- Includes a chapter dedicated to the application of fluid inclusion studies to magmatic and hydrothermal mineralization in the Galway Granite Complex and its environs

This book serves as a resource for professionals, academics and senior undergraduate and graduate students working and studying in the fields of geology, earth sciences and environmental sciences.

The Role of Geospatial Technologies in Landslide Hazard Assessment

By Sudhakar Dhondu Pardeshi, Sumant Eknath Autade, Suchitra Sudhakar Pardeshi

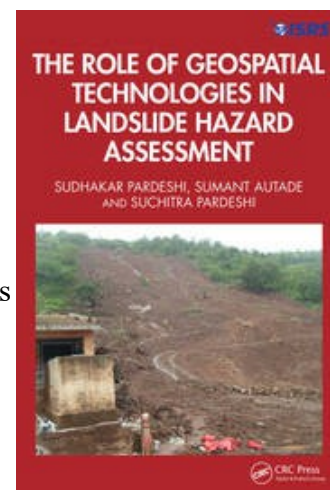
ISBN 9781032347172

304 Pages 105 Color & 10 B/W Illustrations

July 20, 2026 by CRC Press

1295 Kč

This book is designed to provide a detailed, methodological framework for landslide hazard assessment. The focus is on various dimensions of landslide hazard assessment, including the terminologies used in landslide hazard analysis and landslide inventory systems used globally and their relevance in generating a complete and reliable landslide database for further analysis, supported by global case studies. It includes an overview of the methodological developments in landslide hazard assessment and role of geospatial technologies in landslide studies.



Features:

- Helps readers to understand the technical details of geospatial techniques applied in hazard management.
- Deals with the practicalities of how to recognise and classify unstable terrain.
- Covers recent advances in landslide estimation, particularly the automated means of landslide susceptibility estimation.
- Explores methodological frameworks of landslide hazard assessment.
- Illustrates case studies from the United States, Europe, and Asia, including demonstrations of different methodologies of landslide susceptibility zonation.

This book is aimed at researchers, graduate students, and libraries in geotechnical and environmental engineering.

Fundamentals of Sedimentology

By Sreepat Jain

ISBN 9781032305356

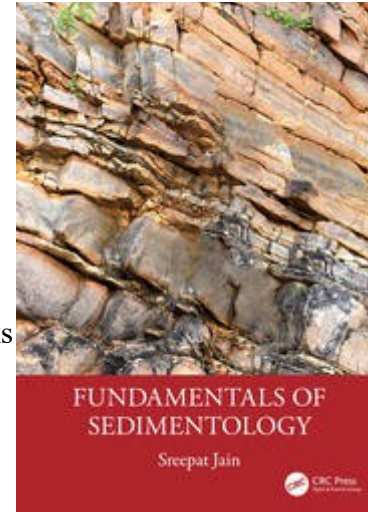
502 Pages 271 Color & 18 B/W Illustrations

June 22, 2026 by CRC Press

1495 Kč

This new textbook is a modern look at key concepts of sedimentology. With lavish, colorful, and abundant illustrations and easy-to-understand explanations, the book focuses on the concepts required to understand physical, chemical, and biological characteristics of sedimentary rocks and the processes involved in their formation. This includes the transportation, deposition, and transformation of sediments. It also emphasizes how the understanding of sedimentary rocks can be used to interpret all continental, marginal marine, and deep-water oceanic environments.

Written with undergraduate-level students in mind, it serves as a primary textbook for the new generation of students.



Features

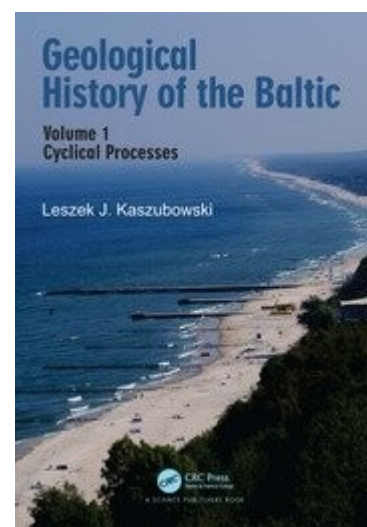
- Fully up-to-date coverage, using the latest studies in the field of sedimentology.
- Many colorful illustrations to facilitate the understanding of key concepts.
- Explanations that are jargon-free and easy to understand for the undergraduate-level reader.
- Examples to interpret ancient environmental conditions in sediment source areas and depositional sites

Written by an experienced researcher and academic who has taught the course at different universities and countries for over 20 years, Fundamentals of Sedimentology is an excellent resource for upper-level undergraduate and graduate students studying Geology, Geomorphology, Physical Geology, and Geography, and it serves as a great reference for entry-level researchers who work in the same fields.

Geological History of the Baltic

Volume 1: Cyclical Processes

By Leszek J. Kaszubowski



ISBN 9781032855752

374 Pages 5 Color & 237 B/W Illustrations

June 22, 2026 by CRC Press

1679 Kč

The book presents the cyclicity and micro-cyclicity phenomena which occurred during climate changes and during marine transgressions and regressions. As calculated by the author on the basis of geological research, the climatic cycle of the Earth allows a better understanding of climate changes and associated geological processes in the last 20,000 years. In addition, the author discusses the structure of the sub-Quaternary bedrock and analyses complex geological structures of the Baltic Sea Quaternary deposits. Individual chapters address key aspects of:

- tectonic and geological analysis of the Baltic Sea basin
- detailed tectonic and geological analysis of the Polish Baltic Sea and Polish coastal zone
- global geotectonic cycles of the supercontinents
- cyclicity and micro-cyclicity arising in the atmosphere and hydrosphere of the Earth
- the climatic cycle of the Earth, presented for a better understanding of climate changes and associated geological processes in the last 20,000 years
- calculating the extent of the influence of climate change and tectonic movements on marine transgressions and regressions
- simulation and correlation of the 310-year climate cycle
- predicted future Earth climate cycles in the Northern Hemisphere

The book will be useful for students and scientists of marine geology, oceanography, geography and environmental engineering. It will also be of practical utility for all specialists dealing with marine basins and coastal zones, including marine geologists, coastal geologists and geomorphologists, geographers, as well as engineering geologists, geotechnicians and civil engineers. The book is generally related to the discipline of marine geology, and deals directly with the Baltic Sea basin. However, the climate cycle of the Earth, which affects the course of marine transgressions and regressions, has a supra-regional dimension.

Geophysical Methods

Fundamentals, Applications, and Case Studies

By O.P. Mishra, D.C. Naskar

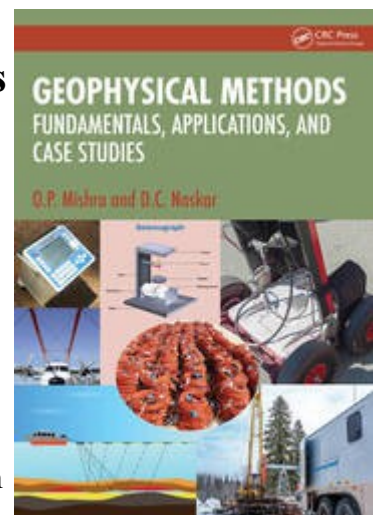
ISBN 9781032661896

592 Pages 35 Color & 139 B/W Illustrations

June 22, 2026 by CRC Press

1475 Kč

This book includes a complete background on geophysical methods of exploration, practices, and case histories for a better understanding of the subject of geophysics and its applicability in



diverse fields of exploration. It details both conventional and advanced geophysical techniques, with descriptions of the physics involved in different methodologies. Divided into 16 chapters, the book includes detailed discussions of the theory of individual methods, the operation of specific instruments, the presentation of results, and their interpretation.

Features:

- Discusses potential geophysical methods and applications in mineral exploration
- Reviews natural hazard risk mitigation using geophysical methods
- Covers surface, air, marine, and well logging geophysical applications in natural resource exploration
- Includes electrical, electromagnetic, seismic, and radioactive geophysical methods supported by successful case histories
- Strengthens mathematical and problem-solving skills covering all the geophysical aspects

This book is aimed at graduate and post-graduate students in applied geophysics, exploration geophysics, marine geophysics, engineering, and environmental geophysics.

Quantitative Remote Sensing

Fundamentals and Environmental Applications

By Jay Gao

ISBN 9781032852898

460 Pages 138 Color & 6 B/W Illustrations

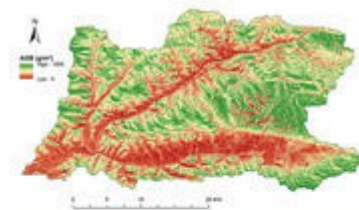
June 22, 2026 by CRC Press

1475 Kč

This book provides comprehensive and in-depth explanations of all topics related to quantitative remote sensing and its applications in terrestrial, biospheric, hydrospheric, and atmospheric studies. It elucidates how to retrieve quantitative information on a wide range of environmental parameters from various remote sensing data at the highest accuracy possible and expounds how different aspects of the target of remote sensing can be quantified using diverse analytical methods and level of accuracy. Written in an easy-to-follow language, logically organized, and with step-by-step examples, the book assists readers to deepen their understanding of the theory and cutting-edge research on quantitative remote sensing.

Features

- Explains how to retrieve quantitative information on a wide range of environmental parameters from various tailored remote sensing data at the highest accuracy possible.
- Manifests the author's decades of teaching and research in quantitative remote sensing and approaches the subject from both theoretical and pragmatic perspectives, informed by the latest research outcomes.



- Includes practical and real-life examples to illustrate how the quantitative information on a target can be retrieved from a given type of remote sensing data.
- Focuses on the latest developments in the field of quantitative remote sensing.
- Introduces sufficient mathematical concepts to reveal how remotely sensed data are converted to quantitative information while providing quality assurance of the retrieved results.

This is a suitable textbook for upper-level undergraduate or postgraduate students and serves as a handy and valuable reference for professionals working in monitoring the environment. By reading this book, readers gain a sound understanding of how to retrieve quantitative information on the environment from diverse remote sensing data using the most appropriate cutting-edge methods and software.

Remote Sensing for Geophysicists

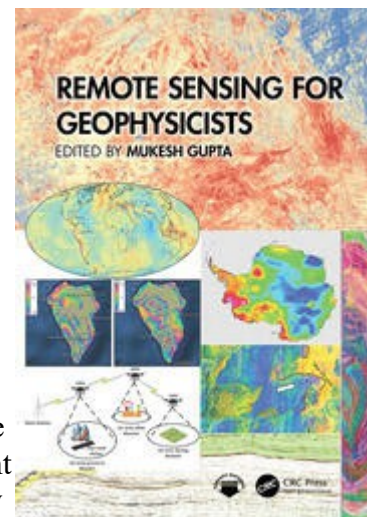
Edited By Mukesh Gupta

ISBN 9781032778938

526 Pages 107 Color & 52 B/W Illustrations

June 22, 2026 by CRC Press

1845 Kč



Geophysical exploration methods are very expensive and invasive methods for surveys. Remote sensing methods are non-invasive and much cheaper for investigating the Earth's surface. This book bridges this gap and aims to integrate exploration geophysics with remote sensing as a cost-effective method which is easy to implement for prospecting in different areas. It provides exploration geophysicists with the necessary information to use advanced remote sensing technology in the exploration of oil and gas, minerals, and groundwater. It describes the integration of remote sensing in each of the nine exploration methods based on over 11 case studies from different countries across the globe.

Features:

- Describes the geophysical exploration methods that geophysicists frequently use, along with suitable remote sensing techniques
- Offers a well-structured one-stop guide for finding a suitable remote sensing technique for a specific geophysical exploration method
- Provides case studies on the exploration of oil, gas, and groundwater with step-by-step instructions using remote sensing technology
- Serves as a practical field book for exploration geophysicists who never used or rarely use remote sensing.
- Enables exploration geophysicists to understand and interpret remote sensing data for the assessment of complex explorations

This book is an excellent resource for professionals, researchers, academics, and students with a background in remote sensing across many disciplines in Earth sciences such as geology, hydrology, petrology, mining, geography, geosciences, etc.