## FALL 2016 – Title Selection
### Environmental Sciences | Earth Sciences | Geography

<table>
<thead>
<tr>
<th>ISBN</th>
<th>Author</th>
<th>Title</th>
<th>Subtitle</th>
</tr>
</thead>
<tbody>
<tr>
<td>978-3-319-39263-9</td>
<td>Abzalov</td>
<td>Applied Mining Geology</td>
<td></td>
</tr>
<tr>
<td>978-3-319-40435-6</td>
<td>Alsadi</td>
<td>Seismic Hydrocarbon Exploration</td>
<td>2D and 3D Techniques</td>
</tr>
<tr>
<td>978-3-319-32663-4</td>
<td>Bahrainy</td>
<td>Toward an Integrative Theory of Urban Design</td>
<td></td>
</tr>
<tr>
<td>978-3-319-32682-5</td>
<td>Baloks</td>
<td>Celebrating Soil</td>
<td>Discovering Soils and Landscapes</td>
</tr>
<tr>
<td>978-94-6239-218-2</td>
<td>Coxon</td>
<td>Advances in Irish Quaternary Studies</td>
<td></td>
</tr>
<tr>
<td>978-3-319-35157-5</td>
<td>Craw</td>
<td>Macraes Orogenic Gold Deposit (New Zealand)</td>
<td>Origin and Development of a World Class Gold Mine</td>
</tr>
<tr>
<td>978-3-319-32929-1</td>
<td>Esteban</td>
<td>Sustainability Science: Field Methods and Exercises</td>
<td></td>
</tr>
<tr>
<td>978-981-10-0763-7</td>
<td>Gardetti</td>
<td>Ethnic Fashion</td>
<td></td>
</tr>
<tr>
<td>978-3-319-32611-5</td>
<td>Glazer</td>
<td>Mine Seismology: Data Analysis and Interpretation</td>
<td>Palabora Mine Caving Process as Revealed by Induced Seismicity</td>
</tr>
<tr>
<td>978-3-319-30464-9</td>
<td>Harris</td>
<td>Geobiotechnological Solutions to Anthropogenic Disturbances</td>
<td>A Caribbean Perspective</td>
</tr>
<tr>
<td>978-3-319-25033-5</td>
<td>Herrmann</td>
<td>Indigenous Peoples’ Governance of Land and Protected Territories in the Arctic</td>
<td></td>
</tr>
<tr>
<td>978-3-319-44449-9</td>
<td>Hooke</td>
<td>Combating Desertification and Land Degradation</td>
<td>Spatial Strategies Using Vegetation</td>
</tr>
<tr>
<td>978-981-10-1937-1</td>
<td>Jahren</td>
<td>How Water Influences Our Lives</td>
<td></td>
</tr>
<tr>
<td>978-81-322-3656-6</td>
<td>Jain</td>
<td>Fundamentals of Invertebrate Palaeontology</td>
<td>Macrofossils</td>
</tr>
<tr>
<td>978-981-10-0148-2</td>
<td>Karthikeyan</td>
<td>Recycling of Solid Waste for Biofuels and Bio-chemicals</td>
<td></td>
</tr>
<tr>
<td>ISBN</td>
<td>Author</td>
<td>Title</td>
<td>Subtitle</td>
</tr>
<tr>
<td>---------------------</td>
<td>---------------</td>
<td>----------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>978-3-319-42522-1</td>
<td>Kämpf</td>
<td><em>Upwelling Systems of the World</em></td>
<td>A Scientific Journey to the Most Productive Marine Ecosystems</td>
</tr>
<tr>
<td>978-981-10-2328-6</td>
<td>Lee</td>
<td><em>Morphological Analysis of Cultural DNA</em></td>
<td>Tools for Decoding Culture-Embedded Forms</td>
</tr>
<tr>
<td>978-3-319-42729-4</td>
<td>Lottermoser</td>
<td><em>Environmental Indicators in Metal Mining</em></td>
<td></td>
</tr>
<tr>
<td>978-3-319-44325-6</td>
<td>Malone</td>
<td><em>Using R for Digital Soil Mapping</em></td>
<td></td>
</tr>
<tr>
<td>978-981-10-0565-7</td>
<td>Muthu</td>
<td><em>Sustainable Fibres for Fashion Industry</em></td>
<td></td>
</tr>
<tr>
<td>978-981-10-0604-3</td>
<td>Muthu</td>
<td><em>Handbook of Sustainability in Additive Manufacturing</em></td>
<td>Volume 2</td>
</tr>
<tr>
<td>978-3-319-44716-2</td>
<td>Muñiz Solari</td>
<td><em>Learning Progressions in Geography Education</em></td>
<td>International Perspectives</td>
</tr>
<tr>
<td>978-3-319-43560-2</td>
<td>Naghettini</td>
<td><em>Fundamentals of Statistical Hydrology</em></td>
<td></td>
</tr>
<tr>
<td>978-94-017-7550-2</td>
<td>Sabadini</td>
<td><em>Global Dynamics of the Earth: Applications of Viscoelastic Relaxation Theory to Solid-Earth and Planetary Geophysics</em></td>
<td></td>
</tr>
<tr>
<td>978-3-319-26990-0</td>
<td>Sagynbekova</td>
<td><em>The Impact of International Migration</em></td>
<td>Process and Contemporary Trends in Kyrgyzstan</td>
</tr>
<tr>
<td>978-981-10-2058-2</td>
<td>Sakhuja</td>
<td><em>Asia and the Arctic</em></td>
<td>Narratives, Perspectives and Policies</td>
</tr>
<tr>
<td>978-3-319-38805-2</td>
<td>Santarius</td>
<td><em>Rethinking Climate and Energy Policies</em></td>
<td>New Perspectives on the Rebound Phenomenon</td>
</tr>
<tr>
<td>978-3-319-45622-5</td>
<td>Sati</td>
<td><em>A Sustainable Livelihood Approach to Poverty Reduction</em></td>
<td>An Empirical Analysis of Mizoram, the Eastern Extension of the Himalaya</td>
</tr>
<tr>
<td>978-3-319-30215-7</td>
<td>Satoh</td>
<td><em>Irrigated Agriculture in Egypt</em></td>
<td>Past, Present and Future</td>
</tr>
<tr>
<td>978-3-662-50295-2</td>
<td>Schiebel</td>
<td><em>Planktic Foraminifers in the Modern Ocean</em></td>
<td>Ecology, Biogeochemistry, and Application</td>
</tr>
<tr>
<td>978-3-319-27241-2</td>
<td>Schwarzbauer</td>
<td><em>From Biomolecules to Chemofossils</em></td>
<td></td>
</tr>
<tr>
<td>978-981-10-1934-0</td>
<td>Scudder</td>
<td><em>Aswan High Dam Resettlement of Egyptian Nubians</em></td>
<td></td>
</tr>
<tr>
<td>Code</td>
<td>Author</td>
<td>Title</td>
<td>Description</td>
</tr>
<tr>
<td>------------------</td>
<td>---------</td>
<td>----------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>978-3-319-38874-8</td>
<td>Siegel</td>
<td>Mitigation of Dangers from Natural and Anthropogenic Hazards</td>
<td>Prediction, Prevention, and Preparedness</td>
</tr>
<tr>
<td>978-3-319-40471-4</td>
<td>Siegrist</td>
<td>Decentralized Water Reclamation Engineering</td>
<td>A Curriculum Workbook</td>
</tr>
<tr>
<td>978-3-319-43408-7</td>
<td>Sindalovskiy</td>
<td>Aquifer Test Solutions</td>
<td>A Practitioner’s Guide with Algorithms Using ANSDIMAT</td>
</tr>
<tr>
<td>978-981-10-1865-7</td>
<td>Singh</td>
<td>Principles and Applications of Environmental Biotechnology for a Sustainable Future</td>
<td></td>
</tr>
<tr>
<td>978-90-481-2551-7</td>
<td>Sivakumar</td>
<td>Chaos in Hydrology</td>
<td>Bridging Determinism and Stochasticity</td>
</tr>
<tr>
<td>978-3-319-30624-7</td>
<td>Steinberg</td>
<td>Extreme Weather, Health, and Communities</td>
<td>Interdisciplinary Engagement Strategies</td>
</tr>
<tr>
<td>978-981-10-1913-5</td>
<td>Tortajada</td>
<td>Increasing Resilience to Climate Variability and Change</td>
<td>The Roles of Infrastructure and Governance in the Context of Adaptation</td>
</tr>
<tr>
<td>978-3-319-27017-3</td>
<td>Vishal</td>
<td>Geologic Carbon Sequestration</td>
<td>Understanding Reservoir Behavior</td>
</tr>
<tr>
<td>978-3-319-33848-4</td>
<td>Vita-Finzi</td>
<td>A History of the Solar System</td>
<td></td>
</tr>
<tr>
<td>978-1-4939-6614-1</td>
<td>Wood</td>
<td>Mental Modeling Approach</td>
<td>Risk Management Application Case Studies</td>
</tr>
</tbody>
</table>
Digital signals and the aliasing problem, which is presented in an accessible form. The book is designed to cover seismic oil-exploration techniques, including conventional methods and new approaches. The attributes presented in the book can be used as a reference and as a guide by mining industry specialists developing mining projects and for optimizing mining geology procedures. Applications of the methods are explained using case studies and are facilitated by the computer scripts added to the book as [...] More on www.springer.com/978-3-319-39243-3

Applied Mining Geology

This book provides a detailed overview of the operational principles of modern mining geology, which are presented as a good mix of theory and practice, allowing use by a broad range of specialists, from students to lecturers and experienced geologists. The book includes comprehensive descriptions of mining geology techniques, including conventional methods and new approaches. The attributes presented in the book can be used as a reference and as a guide by mining industry specialists developing mining projects and for optimizing mining geology procedures. Applications of the methods are explained using case studies and are facilitated by the computer scripts added to the book as [...] More on www.springer.com/978-3-319-39263-9

Seismic Hydrocarbon Exploration

2D and 3D Techniques

This book presents the essential principles and applications of seismic oil-exploration techniques. It concisely covers all stages in exploration activities (data field acquisition, data processing and interpretation), supplementing the main text with a wealth of (>350) illustrations and figures. The book concentrates on the physics of the applied principles, avoiding intricate mathematical treatment and lengthy theoretical reasoning. A further prominent feature is the inclusion of a separate chapter on 3D surveying techniques and another, equally important chapter on seismic digital signals and the aliasing problem, which is presented in an accessible form. The book is designed to cover seismic oil-exploration techniques, including conventional methods and new approaches. The attributes presented in the book can be used as a reference and as a guide by mining industry specialists developing mining projects and for optimizing mining geology procedures. Applications of the methods are explained using case studies and are facilitated by the computer scripts added to the book as [...] More on www.springer.com/978-3-319-40435-6

Advances in Irish Quaternary Studies

This book provides a new synthesis of the published research on the Quaternary of Ireland. It reviews a number of significant advances in the last three decades on the understanding of the pattern and chronology of the Irish Quaternary glacial, interglacial, floristic and occupation records. Those utilising the latest technology have enabled significant advances in geochronology using accelerated mass spectrometry, cosmogenic nuclide extraction and optically stimulated luminescence amongst others. This has been commensurate with high-resolution geomorphological mapping of the Irish land surface and continental shelf using a wide range of remote sensing techniques including MBES and [...] More on www.springer.com/978-3-319-32682-5

Celebrating Soil

Discovering Soils and Landscapes

This richly illustrated book celebrates the diversity, importance, and intrinsic beauty of soils around the world and helps the reader to understand the ways that soils are related to the landscapes in which they form. The book unravels the complex bond between humans and soils and the importance of soils in our cultures and everyday lives. Soil is critical to terrestrial life on earth. It underpins human food supply and provides materials on which we build our lives. Soil is out of sight and often out of mind, thus easy to overlook. Yet soil has tremendous variety and intrinsic beauty for those who care to look. Soil contains a memory of the events that have shaped the landscape [...] More on www.springer.com/978-3-319-32682-5
Macraes Orogenic Gold Deposit (New Zealand)

Origin and Development of a World Class Gold Mine

This book describes the nature and origin of the Macraes gold deposit. It also documents the key features of this spectacular deposit for a wide range of professionals in the resource geology community. This world-class gold deposit has been a spectacular geological and economic success story, as it has developed from a small historical gold mine in discontinuous quartz veins measuring only meters to a large-scale mine in deposits spreading over kilometres in extensive disseminated gold-bearing rock.

More on www.springer.com/978-3-319-35157-5

Hardcover
2016. XII, 243 p. 52 illus., 25 illus. in color.
► 123,04 €
ISBN 978-3-319-35157-5
Erscheinungstermin: September 2, 2016

Ethnic Fashion

This is the first book to introduce readers to the crux of ethnic fashion. Covering all aspects, it addresses the significance of sustainability (including culture) and ethnic fashion in the apparel industry. It also highlights concepts and case studies pertaining to ethnic fashion.

More on www.springer.com/978-981-10-0763-7

Hardcover
2016. VII, 197 p. 141 illus. (Environmental Footprints and Eco-design of Products and Processes)
► 123,04 €
ISBN 978-981-10-0763-7
Gewöhnlich versandfertig in 3-5 Werktagen.

Mine Seismology: Data Analysis and Interpretation
Palabora Mine Caving Process as Revealed by Induced Seismicity

This book offers an in-depth analysis and interpretation methods applicable to mine-induced seismicity. It is based on over 40 years of experience in mine and exploration geophysics. Another unique feature of this book is the complete history of the caving process as evidenced by the recorded seismicity at the South African copper mine Palabora Lift 1. Until now, the literature has only presented theory and case stud-
oceans and how this is compromised by human activities.

More on www.springer.com/978-3-319-42522-1

Hardcover
2017. XV, 433 p. 200 illus.
► 160,49 €
ISBN 978-3-319-42522-1
Erscheinungstermin: September 8, 2016

Forthcoming
J.-H. Lee (Ed.)

Morphological Analysis of Cultural DNA
Tools for Decoding Culture-Embedded Forms
This volume describes research in computational design which implements shape grammars or space syntax for morphological analysis, applying these scientific and rule-based methodologies to cultural aspects of the field. The term ‘cultural DNA’ describes the effort to explore computational design from the perspectives of a meme, a socio-cultural analogy to genes. Based on the 1st Cultural DNA Workshop, held at KAIST, Daejeon, Korea in 2015, the book considers whether there is such a thing as a ‘cultural DNA’ common throughout various domains, and if so how computer-assisted tools and methodologies play a role in its investigation. Following an introduction covering some fundamental...

More on www.springer.com/978-981-10-2328-6

Hardcover
2017. VI, 216 p. 107 illus., 59 illus. in color. (KAIST Research Series)
► ca. 105,93 €
ISBN 987-981-10-2328-6
Erscheinungstermin: September 26, 2016

B. Lottermoser (Ed.)

Environmental Indicators in Metal Mining
This book represents an important new contribution to the literature that presents practical and comprehensive solutions to mining activities. Its timely content has been prepared by several experts from around the world and its practical format addresses the major environmental predictive techniques required for the extraction and processing of metal resources. Packed with reviews and case studies, it covers current methods used to forecast environmental effects of metal mining.

More on www.springer.com/978-3-319-42729-4

Hardcover
► 160,49 €
ISBN 978-3-319-42729-4
Erscheinungstermin: October 6, 2016

S.S. Muthu, M. Gardetti (Eds.)

Sustainable Fibres for Fashion Industry
Volume 2
This book covers all sustainable fibres applicable in the fashion sector. It addresses the importance of these fibres in the fashion sector with the context of sustainability. This book, the first of its kind, addresses all the minute details pertaining to these fibres and connects these fibres with the world of sus-

Handbook of Sustainability in Additive Manufacturing Volume 2
This book highlights essential aspects of sustainability in the Additive Manufacturing (AM) field in two separate volumes. It demonstrates the details of this technology and examines its implications for sustainability throughout the entire product life cycle, embedded carbon, and future research efforts that will be necessary to move this technology towards sustainable mainstream production. Sustainability is nothing new for any industrial field, and AM is no exception. Accordingly, industrialists and scientists alike are intensively engaged in research to promote sustainability in this important field.

More on www.springer.com/978-981-10-0604-3

Hardcover
2016. VIII, 114 p. 73 illus. (Environmental Footprints and Eco-design of Products and Processes)
► 90,94 €
Gewöhnlich versandfertig in 3-5 Werktagen.
Learning Progressions in Geography Education
International Perspectives

This book informs an international audience of teachers, scholars and policymakers about the development of learning progressions for primary and secondary geography education in various countries and regions of the world. The book represents an important contribution to learning progressions research and practice. The different chapters explore how curriculum standards and frameworks in different countries portray progress and sophistication in the learning of geography. The book compares educational systems and how teachers and curriculum developers use the concept of “learning progression” to guide educational practices. As an approach to educational research, learning progressions...

More on www.springer.com/978-3-319-44716-2

Fundamentals of Statistical Hydrology

This textbook covers the main applications of statistical methods in hydrology. It is written for upper undergraduate and graduate students but can be used as a helpful guide for hydrologists, geographers, meteorologists and engineers. The book is very useful for teaching, as it covers the main topics of the subject and contains many worked out examples and proposed exercises. Starting from simple notions of the essential graphical examination of hydrological data, the book gives a complete account of the role that probability considerations must play during model-ling, diagnosis of model fit, prediction and evaluating the uncertainty in model predictions, including the essence of...

More on www.springer.com/978-3-319-43560-2

Global Dynamics of the Earth: Applications of Viscoelastic Relaxation Theory to Solid-Earth and Planetary Geophysics

This volume opens up new perspectives on the physics of the Earth’s interior and planetary bodies for graduate students and researchers working in the fields of geophysics, planetary sciences and geodesy. It looks at our planet in an integrated fashion, linking the physics of its interior to geophysical and geodetic techniques that record, over a broad spectrum of spatial wavelengths and time scales, the ongoing modifications in the shape and gravity field of the planet. Basic issues related to the rheological properties of the Earth and to its slow deformation are considered, in both mathematical and physical terms, within the framework of an analytical relaxation theory...

More on www.springer.com/978-94-017-7550-2

Asia and the Arctic
Narratives, Perspectives and Policies

This book presents narratives, perspectives and policies on the Arctic and brings to fore the strategies of five Asian countries - China, India, Japan, Republic of Korea and Singapore who were granted the status of Permanent Observers in the Arctic Council in 2013. The book also captures Arctic countries’ reactions to Asian approaches, and their expectations from these countries. The melting of the polar sea-ice induced by climate change has placed the Arctic region in the forefront of global scientific, economic, strategic and academic interest. The discourse involves a number...
of issues such as claims of the littoral countries to the continental shelves of the region, the...
This book highlights the long-term resettlement process of the Egyptian Nubian people along the Aswan High Dam. Assessing the resettlement of 48,000 Egyptian Nubians in connection with the High Dam is especially important for three main reasons: firstly, this resettlement process is one of the rare cases in which research begun before the dam was built has continued for over forty years. Secondly, the resettlement of the Egyptian Nubian people is one of the few cases in which the living standards of the large majority improved because of the initial political will of the government, combined with Nubian initiatives. Thirdly, given the complexity of the resettlement process, weaknesses [...] More on www.springer.com/978-978-3-319-38874-8

**Softcover**
2017. XIV, 127 p. (SpringerBriefs in Environmental Science)
➤ 53,49 €
ISBN 978-3-319-38874-8
Gewöhnlich versandfertig in 3-5 Werktagen. July 25, 2016

---

**Mitigation of Dangers from Natural and Anthropogenic Hazards**

**Prediction, Prevention, and Preparedness**

This book advances a three-step program for mitigation of natural and anthropogenic hazards, addressing mitigation economics and funding possibilities to meet the needs of at risk countries that lack the financial resources to invest in disaster reduction programs. Within the context of mitigation, this book covers prediction-prevention-preparedness for global warming/climate change as existing and progressive processes that create or abet slow developing or rapidly occurring hazards that endanger society such as sea level rise, extreme weather events, threats to food/water security, and the spread of infectious diseases.

More on www.springer.com/978-978-3-319-40471-4

**Hardcover**
2016. XVIII, 399 p. 347 illus., 180 illus. in color.
➤ 80,24 €
ISBN 978-3-319-40471-4
Erscheinungstermin: August 11, 2016

---

**Aquifer Test Solutions**

**A Practitioner’s Guide with Algorithms Using ANSDIMAT**

This book, designed as a handbook, provides a systematic treatment of analytical solutions describing groundwater flow during aquifer tests. The book integrates the majority of known solutions from well hydraulics and subsurface flow theory, starting with pioneering work from the early 20th century up to the most recent publications in scientific journals. The book includes about 300 transient solutions covering a wide range of aquifer test scenarios and hydrogeological conditions. All the solutions have been thoroughly tested and implemented in the multifunctional ANSDIMAT software. The book comprises three parts and is supplemented by appendices. The first part of the book is [...] More on www.springer.com/978-978-3-319-43408-7

**Hardcover**
➤ 138,03 €
ISBN 978-3-319-43408-7
Erscheinungstermin: September 23, 2016
biomining and biopesticides. This book also covers renewable and non-renewable bioenergy resources, biodiversity and its conservation, [...]

More on www.springer.com/978-981-10-1865-7

Hardcover
2017. X, 456 p. 115 illus., 81 illus. in color. (Applied Environmental Science and Engineering for a Sustainable Future)
► 90,94 €
Erscheinungstermin: September 15, 2016

Extreme Weather, Health, and Communities
Interdisciplinary Engagement Strategies
This volume presents a unique interdisciplinary approach, drawing on expertise in both the natural and social sciences. A primary goal is to present a scientific and socially integrated perspective on place-based community engagement, extreme weather, and health. Each year extreme weather is leading to natural disasters around the world and exerting huge social and health costs. The International Monetary Fund (2012) estimates that since 2010, 700 worldwide natural disasters have affected more than 450 million people around the globe. The best coping strategy for extreme weather and environmental change is a strong offense. Communities armed with a spatial understanding of their [...] More on www.springer.com/978-3-319-30624-7

Hardcover
2016. XXX, 388 p. 42 illus., 39 illus. in color. (Extreme Weather and Society)
► 160,49 €
ISBN 978-3-319-30624-7
Gewöhnlich versandfertig in 3-5 Werktagen.

Geologic Carbon Sequestration
Understanding Reservoir Behavior
This exclusive compilation written by eminent experts from more than ten countries, outlines the processes and methods for geologic sequestration in different sinks. It discusses and highlights the details of individual storage types, including recent advances in the science and technology of carbon storage. The topic is of immense interest to geoscientists, reservoir engineers, environmentalists and researchers from the scientific and industrial communities working on the methodologies for carbon dioxide storage. Increasing concentrations of anthropogenic carbon dioxide in the atmosphere are often held responsible for the rising temperature of the globe. Geologic sequestration [...] More on www.springer.com/978-3-319-27017-3

Hardcover
2016. XI, 338 p. 108 illus., 69 illus. in color.
► 106,99 €
ISBN 978-3-319-27017-3
Gewöhnlich versandfertig in 3-5 Werktagen.
A History of the Solar System

This well illustrated book presents a compact history of the Solar System from its dusty origins 4,600,000 years ago to the present day. Its primary aim is to show how the planets and their satellites, comets, meteors, interplanetary dust, solar radiation and cosmic rays continually interact, sometimes violently, and it reflects humanity's progress in exploring and interpreting this history. The book is intended for a general readership at a time when human and robotic exploration of space is often in the news and should also appeal to students at all levels. It covers the essentials but refers to a large literature which can be accessed via the internet.

More on www.springer.com/978-3-319-33848-4

Softcover
2016. XII, 100 p. 54 illus., 43 illus. in color.
► 21,39 €
ISBN 978-3-319-33848-4
Gewöhnlich versandfertig in 3-5 Werktagen. August 15, 2016

Forthcoming

M.D. Wood, S. Thorne, D. Kovacs, G. Butte, I. Linkov

Mental Modeling Approach
Risk Management Application Case Studies

This book provides an easy-to-read, user-oriented introduction to mental models research and Mental Modeling Technology™. Mental models are powerful influences human behavior. The book offers insight from the developers and most experienced application professionals of a widely proven methodology for understanding and influencing human judgment, decision making and behavior. The case studies show examples of the methodological concepts in their application context. It is one of the most comprehensive collections of cases focused on government needs of any similar qualitative analysis approach. Finally, it presents an introduction to software tools and tutorials that enable readers[...]

More on www.springer.com/978-1-4939-6614-1

Hardcover
2017. Approx. 320 p. 5 illus. (Risk, Systems and Decisions)
► ca. 106,95 €
ISBN 978-1-4939-6614-1
Erscheinungstermin: October 27, 2016