Sedimentology and stratigraphy

Erosion and Sedimentation
Second edition
Pierre Y. Julien
Colorado State University
The up-to-date second edition of this acclaimed textbook provides an excellent primer on both fundamental concepts of sediment-transport theory and methods for practical applications. With many new worked examples and exercises, this is both an essential resource for students, and a handbook for professionals, in engineering, geosciences and water sciences.

…[presents] the mechanics of sediment motion alongside those subjects in fluid mechanics that are fundamental to understanding sediment transport. The intertwining of the two subjects is carried out particularly well … Each topic is covered clearly, with many carefully designed figures, examples, and exercises … an excellent primer on both fundamental concepts of sediment-transport theory and methods for practical applications. … well written, and nicely illustrated, and it will serve as either a handbook for workers in the field or a textbook for beginning students of the subject. Julien has done a truly admirable job in making … a difficult subject much more accessible to beginning Earth scientists and engineers.”

Jonathan Nathan, Journal of Hydraulic Engineering

Earth Surface Processes, Landforms and Sediment Deposits
John Bridge
State University of New York, Binghamton and Robert Demico
State University of New York, Binghamton
A unique, advanced textbook combining sedimentology and geomorphology in a comprehensive and integrated way.

…very accessible and well organised … a suitable candidate for undergraduate courses in Earth Science and associated disciplines, and the detail found in some sections will benefit graduate-level students and professionals.”

Progress in Physical Geography

The Diatoms
Applications for the Environmental and Earth Sciences
Second edition
Edited by John P. Smol
Queen’s University, Ontario
and Eugene F. Stoemer
University of Michigan, Ann Arbor
This much revised and expanded edition provides a valuable and detailed summary of the many uses of diatoms in a wide range of applications in the environmental and earth sciences. Particular emphasis is placed on the use of diatoms in analysing ecological problems related to climate change, acidification, eutrophication, and other pollution issues. The chapters are divided into sections for easy reference, with separate sections covering indicators in different aquatic environments. A final section explores diatom use in fields of study such as forensics, oil and gas exploration, nanotechnology, and archaeology. Sixteen new chapters have been added since the first edition, including introductory chapters on diatom biology and the numerical approaches used by diatomists. The extensive glossary has also been expanded and now includes over 1,000 detailed entries, which will help non-specialists to use the book effectively.


Palaeontology and life history
Ichnotology
Organism-Substrate Interactions in Space and Time
Luis Buatois
University of Saskatchewan, Canada
and M. Gabriela Mángano
University of Saskatchewan, Canada
This book is an invaluable resource for researchers and graduate students in palaeontology, sedimentology and sequence stratigraphy, as well as industry professionals working in petroleum geoscience. It covers the basic concepts and applications in paleobiology and sedimentology, using examples from the Ediacaran to recent geologic time periods.

2011 276 x 219 mm 400pp 222 colour illus. 978-0-521-85555-6 Hardcover £50.00
Publication April 2011
www.cambridge.org/9780521855556
Palaeontology and life history / Geomorphology and physical geography

Textbook

**Dinosaurs**

*A Concise Natural History*

David E. Fastovsky
University of Rhode Island

*and David B. Weishampel*

The Johns Hopkins University

A lively, well-illustrated text emphasizing the understanding of science over memorization of dinosaur facts.

"I am excited to see that the authors have selected not to overwhelm the student with detail."

Mark Oumette, Hardin-Simmons University

**Contents:**


2009 276 x 219 mm 394pp
978-0-521-49391-8 Hardback £77.00
978-0-521-71902-5 Paperback £35.00

eBook available

www.cambridge.org/9780521493918

**Carnivoran Evolution**

*New Views on Phylogeny, Form and Function*

Edited by Anjali Goswami

University of California, Los Angeles

Presents current advances in our understanding of carnivore evolution with a cohesive series of cutting-edge studies that utilise new methodologies and new data, while also demonstrating how the mammalian order Carnivora is being used as a model group for addressing fundamental topics in biology and palaeontology.

Cambridge Studies in Morphology and Molecules: New Paradigms in Evolutionary Bio, 1

2010 228 x 152 mm 506pp
978-0-521-72953-6 Paperback £33.00
978-0-521-51529-0 Hardback £80.00
978-0-521-73586-5 eBook available

www.cambridge.org/9780521515290

---

Textbook

**An Introduction to the Earth-Life System**

Charles Cockell

The Open University, Milton Keynes

Richard Corfield

The Open University, Milton Keynes

Neil Edwards

The Open University, Milton Keynes

Nigel Harris

The Open University, Milton Keynes

This concise textbook combines Earth and biological sciences to explore the co-evolution of the Earth and life over geological time.

"This innovative Earth science textbook provides a thorough new way to look at the history of Earth and life. The pedagogic aspects are particularly well thought through and current research case studies, engaging questions, and practical examples will be beneficial to both students and instructors."

Mike Benton, University of Bristol

**Contents:**

1. A habitable planet; 2. The emergence and persistence of life; 3. The carbon cycle; 4. Plate tectonics, climate and life; 5. Mountains and climate change; 6. Life in the Phanerozoic; 7. The Earth at extremes; 8. Summary; Answers to questions; Appendices; Further reading; Glossary; Index.

2008 236 x 210 mm 328pp 220 colour illus.
978-0-521-49391-8 Hardback £81.00
978-0-521-72953-6 Paperback £33.00

www.cambridge.org/9780521493918

---

**Geomorphology and physical geography**

*Dryland Climatology*

Sharon E. Nicholson

Florida State University

This book provides a comprehensive overview of dryland climates and their relationship to the physical environment, vegetation, hydrology, and inhabitants. Packed with photographs and an extensive review of the primary literature, this is a unique interdisciplinary resource for researchers, environmental professionals.
and advanced students in fields from climatology to geomorphology. 2011 276 x 219 mm 700pp 728 b/w illus. 20 tables 978-0-521-51649-5 Hardback c. £85.00 Publication April 2011 www.cambridge.org/9780521516495

River Discharge to the Coastal Ocean
A Global Synthesis
John D. Milliman
College of William and Mary, Virginia and Katherine L. Farnsworth
Indiana University
Utilizing the world’s largest database, this book presents a detailed analysis and synthesis of the processes affecting fluvial discharge of water, sediment and dissolved solids to the ocean. It provides an invaluable resource for researchers, professionals and graduate students in hydrology, oceanography, geology, geomorphology and environmental policy. The complete database is available online at www.cambridge.org/milliman.
2011 276 x 219 mm 384pp 10 b/w illus. 160 colour illus. 140 maps 70 tables 978-0-521-87987-3 Hardback c. £100.00 Publication February 2011 www.cambridge.org/9780521879873

TEXTBOOK

Geomorphology
The Mechanics and Chemistry of Landscapes
Robert S. Anderson
University of Colorado, Boulder and Suzanne P. Anderson
University of Colorado, Boulder
This textbook provides a modern, quantitative and process-oriented approach to equip students with the tools to understand geomorphology. Using the basic principles of mechanical and chemical processes the book helps develop student insight, so they can fully explore Earth surface processes and the landscape around them.

‘… this book is terrific! … a model of what a textbook should be, and the first place I’d send a student or colleague to get them excited about landscapes and how we study them.’
Chris Paola, St Anthony Falls Laboratory, Minneapolis

2010 276 x 219 mm 654pp 578 b/w illus. 10 tables 185 exercises 978-0-521-51978-6 Paperback £40.00 www.cambridge.org/9780521519786

Geomorphological Hazards and Disaster Prevention
Edited by Irasema Alcántara-Ayala
Universidad Nacional Autonoma de Mexico, Mexico City
and Andrew S. Goudie
St Cross College, Oxford
A state-of-the-art assessment of how geomorphology contributes to the comprehension, mapping and modelling of hazardous Earth surface processes.
2010 246 x 189 mm 304pp 112 b/w illus. 25 tables 978-0-521-76925-9 Hardback £45.00 www.cambridge.org/9780521769259

Sandstone Landforms
Robert W. Young
University of Wollongong, New South Wales
Describes the wide variety of landforms found in sandstone for researchers and graduate students.
2009 247 x 174 mm 314pp 116 b/w illus. 5 tables 978-0-521-87733-6 Hardback £75.00 www.cambridge.org/9780521877336

Mineralogy, petrology and volcanology

Eruptions that Shook the World
Clive Oppenheimer
University of Cambridge
What does it take for a volcanic eruption to really shake the world? Did volcanic eruptions extinguish the dinosaurs, or help humans to evolve, only to decimate...
their populations with a super-eruption 73,000 years ago? Did they contribute to the ebb and flow of ancient empires, the French Revolution and the rise of fascism in Europe in the 19th century? These are some of the claims made for volcanic cataclysm. Volcanologist Clive Oppenheimer explores rich geological, historical, archaeological and palaeoenvironmental records (such as ice cores and tree rings) to tell the stories behind some of the greatest volcanic events of the past quarter of a billion years. He shows how a forensic approach to volcanology reveals the richness and complexity behind cause and effect, and argues that important lessons for future catastrophe risk management can be drawn from understanding events that took place even at the dawn of human origins.

2011 228 x 152 mm 300pp
100 b/w illus. 10 tables
978-0-521-64112-8 Hardback c. £16.99
Publication May 2011
www.cambridge.org/9780521641128

Volcanic and Tectonic Hazard Assessment for Nuclear Facilities
Edited by Charles B. Connor
University of South Florida
Neil A. Chapman
ITC School of Underground Waste Storage and Disposal, Switzerland
and Laura J. Connor
University of South Florida
A summary of the current state-of-the-art in volcanic and tectonic hazard assessment of nuclear facilities for researchers, geologists and engineers.

2009 247 x 174 mm 638pp
169 b/w illus. 32 colour illus. 27 tables
978-0-521-88797-7 Hardback £85.00
eBook available
www.cambridge.org/9780521887977


Choice Outstanding Academic Title 2009 – Winner
2009 276 x 219 mm 686pp
504 b/w illus. 18 tables 192 exercises
978-0-521-88006-0 Hardback £42.00
www.cambridge.org/9780521880060

Principles of Metamorphic Petrology
R. H. Vernon
Macquarie University, Sydney
and G. L. Clarke
University of Sydney
A complete and modern introduction to the study of metamorphic rocks.

‘The book Principles of Metamorphic Petrology is an absolutely wonderful work and a delight to read. I found the book very refreshing content-wise [with] clarity in terms of the writing style. … Useful glossary, a voluminous bibliography (from Abbott to Zwart) running to almost 70 pages and an index … This book will be of interest to both … metamorphic petrologists and geochronologists.’
Journal of the Geological Society of India


2011 246 x 189 mm 730pp
200 b/w illus. 10 tables 200 exercises
978-0-521-89621-4 Hardback c. £50.00
Publication June 2011
www.cambridge.org/9780521896214

Estimating Groundwater Recharge
Richard W. Healy
United States Geological Survey
With contributions by Bridget R. Scanlon
University of Texas, Austin
An evaluation of the theory and assumptions underlying methods for estimating rates of groundwater recharge. Hydrogeologists, water-resource specialists, civil and agricultural engineers, earth and environmental scientists and agronomists will benefit from this informative and practical book, which is also a useful adjunct text for advanced courses in groundwater or hydrogeology.

2010 246 x 189 mm 256pp
104 b/w illus. 16 tables
978-0-521-86396-4 Hardback £60.00
eBook available
www.cambridge.org/9780521863964

Geochemistry and environmental chemistry

Thermodynamics of the Earth and Planets
Alberto Patiño Douce
University of Georgia
This textbook provides an intuitive yet mathematically rigorous introduction to thermodynamics of planetary processes for advanced students in Earth and planetary sciences. It also provides an innovative and quantitative complement to courses in geological thermodynamics, petrology, chemical oceanography, planetary science, and is of great interest to researchers in these areas.

2011 246 x 189 mm 730pp
200 b/w illus. 10 tables 200 exercises
978-0-521-89621-4 Hardback c. £50.00
Publication June 2011
www.cambridge.org/9780521896214

Petrology

Mineralogy, petrology and volcanology / Geochemistry and environmental chemistry
Geochemistry and environmental chemistry

Cosmogenic Nuclides
Principles, Concepts and Applications in the Earth Surface Sciences
Tibor J. Dunai
University of Edinburgh
The first comprehensive, state-of-the-art introduction to the fast-evolving topic of in-situ produced cosmogenic nuclides, for graduate students and practitioners.
2010 228 x 152 mm 198pp
44 b/w illus. 5 tables
978-0-521-87380-2 Hardback £35.00
eBook available
www.cambridge.org/9780521873802

Geological Fluid Dynamics
Sub-surface Flow and Reactions
Owen M. Phillips
The Johns Hopkins University
Describes fluid flow, transport and contamination in rocks and sediments, for graduate students and professionals in hydrology, water resources, geochemistry.
2009 247 x 174 mm 298pp 6 b/w illus. 978-0-521-86555-5 Hardback £42.00
eBook available
www.cambridge.org/9780521865555

Textbook
Geochemistry
An Introduction
Second edition
Francis Albarède
Ecole Normale Supérieure, Lyon
In this new edition, Albarède refreshingly introduces the essentials of modern geochemistry for students across the Earth and environmental sciences.
‘… this is an excellent textbook written by an excellent teacher … I will recommend it widely … we couldn’t want for a more skillful guide.’
Geological Magazine
Contents: Foreword to the English edition; Foreword to the French edition; Introduction;
1. The properties of elements; 2. Mass conservation and elemental fractionation;
3. Fractionation of stable isotopes; 4. Geochronology and radiogenic tracers;
5. Element transport; 6. Geochemical systems; 7. The chemistry of natural waters;
12. The geochemical variability of magmas; 13. The Earth in the Solar System; 14. The earth’s crust;
15. The Earth in the Solar System; 16. Geology and environmental chemistry; 17. Dynamic reservoir analysis; References; Index.
2008 246 x 189 mm 468pp
196 b/w illus. 8 colour illus. 63 tables
978-0-521-83313-4 Hardback £45.00
eBook available
www.cambridge.org/9780521833134

Isotope Geology
Claude J. Allègre
Institut de Physique du Globe de Paris
Translated by Christopher Sutcliffe
A comprehensive introductory textbook to isotope techniques for undergraduate and graduate courses.
‘I can rave about many … aspects of this book. The most striking is Allègre’s amazing ability to articulate concepts through simple and elegant figures and prose … Allègre’s book represents a long-awaited contribution, which complements those by Faure and Dickin … This book is accessible to all, not just geochemists, but also geophysicists.’
Elements
Contents: Acknowledgements; Preface; 1. Isotopes and radioactivity; 2. The principles of radioactive dating; 3. Radiometric dating methods; 4. Dating by cosmogenic isotopes; 5. Uncertainties and results of radiometric dating; 6. Radiogenic isotope geochemistry; 7. Stable isotope geochemistry; 8. Isotope geology and dynamic reservoir analysis; References; Appendix; Index.
2008 247 x 174 mm 512pp
8 b/w illus. 279 colour illus.
978-0-521-86228-8 Hardback £42.00
eBook available
www.cambridge.org/9780521862288

Isotope Geology
Cosmogenic Nuclides
Principles, Concepts and Applications in the Earth Surface Sciences
Tibor J. Dunai
University of Edinburgh
The first comprehensive, state-of-the-art introduction to the fast-evolving topic of in-situ produced cosmogenic nuclides, for graduate students and practitioners.
2010 228 x 152 mm 198pp
44 b/w illus. 5 tables
978-0-521-88079-4 Hardback £77.00
978-0-521-70693-3 Paperback £34.00
www.cambridge.org/9780521880794

Chemical Oceanography and the Marine Carbon Cycle
Steven Emerson
University of Washington
and John Hedges
University of Washington
A textbook on chemical oceanography with full coverage of the marine carbon cycle.
‘… This book will make an excellent primary text for an upper level or graduate chemical oceanography course as well as an excellent reference for the advanced enthusiast. … The careful presentation of important oceanographic ‘problems’ interspersed with the necessary review of pure chemistry, biology, and earth science makes this book appropriate for a very broad audience. It is a much-needed addition to the tools for teaching chemical oceanography at both the undergraduate and graduate levels.’
Timothy Shaw, Professor of Chemistry, University of South Carolina
2008 247 x 189 mm 532pp
978-0-521-86647-7 Paperback £38.00
978-0-521-16964-6 Paperback £38.00
www.cambridge.org/9780521866477

Marine Carbon Cycle
A textbook on chemical oceanography
Timothy Shaw, Professor of Chemistry, University of Washington
Frank Hedges, University of Edinburgh
This volume follows the chemical history of the ocean from the Big Bang to the present.
‘… This book will make an excellent textbook and graduate course as well as an excellent reference for the advanced enthusiast. … The careful presentation of important oceanographic ‘problems’ interspersed with the necessary review of pure chemistry, biology, and earth science makes this book appropriate for a very broad audience. It is a much-needed addition to the tools for teaching chemical oceanography at both the undergraduate and graduate levels.’
Timothy Shaw, Professor of Chemistry, University of South Carolina
2008 247 x 189 mm 486pp
196 b/w illus. 8 colour illus. 63 tables
978-0-521-83313-4 Hardback £45.00
eBook available
www.cambridge.org/9780521833134

Isotope Geology
The Evolution of Matter
From the Big Bang to the Present Day
Igor Tolstikhin
Kola Scientific Centre, Russian Academy of Sciences
and Jan Kramers
Universität Bern, Switzerland
This volume follows the chemical history of matter from the Big Bang to the present.
‘… This book will make an excellent textbook and graduate course as well as an excellent reference for the advanced enthusiast. … The careful presentation of important oceanographic ‘problems’ interspersed with the necessary review of pure chemistry, biology, and earth science makes this book appropriate for a very broad audience. It is a much-needed addition to the tools for teaching chemical oceanography at both the undergraduate and graduate levels.’
Timothy Shaw, Professor of Chemistry, University of South Carolina
2008 247 x 189 mm 532pp
978-0-521-86647-7 Paperback £38.00
978-0-521-16964-6 Paperback £38.00
www.cambridge.org/9780521866477

Geochemistry and environmental chemistry

Textbook
Geochemistry
An Introduction
Second edition
Francis Albarède
Ecole Normale Supérieure, Lyon
In this new edition, Albarède refreshingly introduces the essentials of modern geochemistry for students across the Earth and environmental sciences.
‘… this is an excellent textbook written by an excellent teacher … I will recommend it widely … we couldn’t want for a more skillful guide.’
Geological Magazine
Contents: Foreword to the English edition; Foreword to the French edition; Introduction;
1. The properties of elements; 2. Mass conservation and elemental fractionation;
3. Fractionation of stable isotopes; 4. Geochronology and radiogenic tracers;
5. Element transport; 6. Geochemical systems; 7. The chemistry of natural waters;
12. The geochemical variability of magmas; 13. The Earth in the Solar System; 14. The earth’s crust;
15. The Earth in the Solar System; 16. Geology and environmental chemistry; 17. Dynamic reservoir analysis; References; Index.
2008 246 x 189 mm 468pp
196 b/w illus. 8 colour illus. 63 tables
978-0-521-83313-4 Hardback £45.00
eBook available
www.cambridge.org/9780521833134

NEW IN PAPERBACK
The Evolution of Matter
From the Big Bang to the Present Day
Igor Tolstikhin
Kola Scientific Centre, Russian Academy of Sciences
and Jan Kramers
Universität Bern, Switzerland
This volume follows the chemical history of matter from the Big Bang to the present.
2008 247 x 174 mm 532pp
978-0-521-86647-7 Paperback £38.00
978-0-521-16964-6 Paperback £38.00
www.cambridge.org/9780521866477

Geochemistry and environmental chemistry
Engineering, petroleum and mining geoscience

**NEW IN PAPERBACK**

**Reservoir Geomechanics**

Mark D. Zoback  
Stanford University, California

This interdisciplinary book is a practical reference for geoscientists and engineers in the petroleum and geothermal industries, and for research scientists interested in stress measurements and their application. It addresses a wide range of geomechanical problems that arise during the exploitation of oil and gas reservoirs.

'A very comprehensive and complete book spanning all the aspects of stress within the accessible Earth. It is particularly useful in the fields of oil industry, geothermics and seismic hazard.'

Tectonophysics

2010 247 x 174 mm 464pp  
174 b/w illus. 48 colour illus.  
978-0-521-14619-7 Paperback £45.00  
www.cambridge.org/9780521146197

**Challenged by Carbon**

The Oil Industry and Climate Change  
Bryan Lovell  
Department of Earth Sciences, University of Cambridge

A unique new geological perspective on the oil industry’s impact on climate change and its potential role in stabilizing carbon emissions.

2009 228 x 152 mm 230pp  
66 b/w illus. 8 tables  
978-0-521-19701-4 Hardback £61.00  
978-0-521-14559-6 Paperback £20.99  
www.cambridge.org/9780521197014

**Solid earth geophysics**

**TEXTBOOK**

**Heat Generation and Transport in the Earth**

Claude Jaupart  
Université Paris-Diderot Institut de Physique du Globe de Paris  
and Jean-Claude Mareschal  
Université du Québec, Montréal

This up-to-date treatise on heat transport processes explains the key physical principles with simple arguments and scaling laws that allow quantitative evaluation of heat flux and cooling conditions in a variety of geological settings and systems. An essential resource for advanced students and researchers of geophysics, geodynamics and magmatic processes.


2010 247 x 174 mm 476pp  
164 b/w illus. 16 colour illus. 40 tables 70 exercises  
978-0-521-89488-3 Hardback £45.00  
www.cambridge.org/9780521894883

**Quantitative Seismic Interpretation**

Applying Rock Physics Tools to Reduce Interpretation Risk  
Per Avesth  
Norwegian University of Science and Technology, Trondheim, and Odin Petroleum, Bergen  
Tapan Mukerji  
Stanford University, California  
and Gary Mavko  
Stanford University, California

Quantitative Seismic Interpretation demonstrates how rock physics can be applied to predict reservoir parameters from seismically derived attributes. Aimed at graduate students, academics and industry professionals working in the areas of petroleum geoscience and exploration seismology, it includes exercises and a case-study for which data and codes are provided.

‘… a book that has a little something for everyone.’  
EOS, Transactions, American Geophysical Union

2010 247 x 174 mm 408pp  
171 b/w illus. 110 colour illus. 978-0-521-15135-1 Paperback £45.00  
www.cambridge.org/9780521151351

**Earthquakes in the Mediterranean and Middle East**

A Multidisciplinary Study of Seismicity up to 1900  
Nicholas Ambraseys  
Imperial College of Science, Technology and Medicine, London

Reference volume examining historical evidence from the last 4000 years to analyse earthquakes in the eastern Mediterranean and Middle East.

2009 276 x 219 mm 968pp  
83 b/w illus. 23 maps 978-0-521-87292-8 Hardback £128.00  
www.cambridge.org/9780521872928

**TEXTBOOK**

**Introduction to Seismology**

Second edition  
Peter M. Shearer  
University of California, San Diego

Provides an approachable and concise introduction to seismic theory for a one-semester undergraduate course.

‘… a concise and practical survey text that does a fine job of covering the basics … it is ideally suited for an intermediate to advanced undergraduate class …’  
Seismological Research Letters


2010 247 x 174 mm 830pp  
10 b/w illus. 10 tables 79 exercises  
978-0-521-70842-5 Paperback £37.00  
eBook available  
www.cambridge.org/9780521708425
Solid earth geophysics / Remote sensing and GIS

Seismic Interferometry
Gerard Thomas Schuster
University of Utah

Describes the theory and practice of seismic interferometry for academic researchers, oil industry professionals and advanced students.
2009 247 x 174 mm 274pp 978-0-521-87124-2 Hardback £75.00
eBook available www.cambridge.org/9780521871242

Viscoelastic Waves in Layered Media
Roger D. Borcherd
United States Geological Survey, California

Presents innovative mathematical theory and corresponding numerical results for wave propagation in layered media with arbitrary amounts of intrinsic absorption.
2009 247 x 174 mm 328pp 88 b/w illus. 3 colour illus. 1 table 978-0-521-89853-9 Hardback £75.00
eBook available www.cambridge.org/9780521898539

The Rock Physics Handbook
Tools for Seismic Analysis of Porous Media
Second edition
Gary Mavko
Stanford University, California

A significantly expanded new edition of this practical guide to rock physics and geophysical interpretation for reservoir geophysicists and engineers.
2009 247 x 174 mm 524pp 28 tables 978-0-521-86136-6 Hardback £48.00
eBook available www.cambridge.org/9780521861366

A Breviary of Seismic Tomography
Imaging the Interior of the Earth and Sun
Guest Nolet
Geosciences Azur, France

The first textbook to provide an extensive introduction to seismic tomography for advanced students and research practitioners.
2008 247 x 174 mm 360pp 100 b/w illus. 978-0-521-88244-6 Hardback £86.00
eBook available www.cambridge.org/9780521882446

Physics of the Earth
Fourth edition
Frank D. Stacey
CSIRO Division of Exploration and Mining, Australia

and Paul M. Davis
University of California, Los Angeles

A classic graduate textbook providing students with the necessary grounding to embark on geophysics research.

‘Physics of the Earth will continue to set the standard for the teaching of deep or whole earth geophysics.’ Vernon Cormier, Pure and Applied Geophysics

2008 236 x 210 mm 398pp 250 colour illus. 978-0-521-49424-3 Hardback £81.00 978-0-521-72954-3 Paperback £33.00 www.cambridge.org/9780521494243

Remote sensing and GIS

Image Registration for Remote Sensing
Edited by Jacqueline Le Moigne
NASA-Goddard Space Flight Center

Nathan S. Netanyahu
Bar-Ilan University, Israel and University of Maryland, College Park

and Roger D. Eastman
Loyola University Maryland

This book provides a summary of current research in the application of image registration to satellite imagery. Presenting algorithms for creating mosaics and tracking changes on the planet’s surface over time, it is an
Remote sensing and GIS / Planetary science and astrobiology

Planetary science and astrobiology

The Cambridge Guide to the Solar System
Second edition
Kenneth R. Lang
Tufts University, Massachusetts

Richly illustrated with full-color images, this book is a comprehensive, up-to-date description of the planets, their moons, and recent exoplanet discoveries. This second edition of a now classic reference is brought up to date with fascinating new discoveries from 12 recent Solar System missions. Examples include water on the Moon, volcanism on Mercury’s previously unseen half, vast buried glaciers on Mars, geysers on Saturn’s moon Enceladus, lakes of hydrocarbons on Titan, encounter with asteroid Itokawa, and sample return from comet Wild 2. The book is further enhanced by hundreds of striking new images of the planets and moons. Written at an introductory level appropriate for undergraduate and high-school students, it provides fresh insights that appeal to anyone with an interest in planetary science. A website hosted by the author contains all the images in the book with an overview of their importance. A link to this can be found at www.cambridge.org/solarsystem.

‘Journeys deep into space have revealed dozens of distinctive worlds of unexpected diversity. Ken Lang presents a richly illustrated and remarkably thorough guide to the new view of the Solar System that has emerged, a view that beckons us on further journeys of discovery.’
Edward Stone, NASA Jet Propulsion Laboratory

2011 276 x 219 mm 420pp
200 b/w illus. 225 colour illus. 62 tables
978-0-521-19857-8 Hardback £35.00
Publication February 2011
www.cambridge.org/9780521198578

Atlas of the Galilean Satellites
Paul Schenk
Lunar and Planetary Institute, Houston

Complete color global maps and high-resolution mosaics of Jupiter’s four large moons — Io, Europa, Ganymede and Callisto — are compiled for the first time in this important atlas. The satellites are revealed as four visually striking and geologically diverse planetary bodies: Io’s volcanic lavas and plumes and towering mountains; Europa’s fissured ice surface; the craters, fractures and polar caps of Ganymede; and the giant impact basins, desiccated plains and icy pinnacles of Callisto. Featuring images taken from the recent Galileo mission, this atlas is a comprehensive mapping reference guide for researchers. It contains 65 global and regional maps, nearly 250 high-resolution mosaics, and images taken at resolutions from 500 meters to as high as 6 meters.
2010 276 x 240 mm 408pp 795 colour illus.
978-0-521-86835-8 Hardback £95.00
ebook available
www.cambridge.org/9780521868358

Pluto
Sentinel of the Outer Solar System
Barrie W. Jones
The Open University, Milton Keynes

Orbiting at the edge of the outer Solar System, Pluto is an intriguing object in astronomy. Since the fascinating events surrounding its discovery, it has helped increase our understanding of the origin and evolution of the Solar System, and raised questions about the nature and benefits of scientific classification. This is a timely and exciting account of Pluto and its satellites. The author uses Pluto as a case study to discuss discovery in astronomy, how remote astronomical bodies are investigated, and the role of classification in science by discussing Pluto’s recent classification as a dwarf planet. Besides Pluto, the book also explores the rich assortment of bodies that constitute the Edgeworth–Kuiper Belt, of which Pluto is the largest innermost member. Richly illustrated, this text is written for general readers, amateur astronomers and students alike. Boxed text provides more advanced information especially for readers who wish to delve deeper into the subject. Contributors: Timothy Ferris, Iris Fry, Steven Dick, Ann Druyan, Pinky Nelson, Neil Tyson, Steve Benner, William Bains, Roger Buick, Lynn Rothschild, John Baross, Joe Kirschvink, Andrew Knoll, Simon Conway Morris, Roger Hanlon, Lori Marino, Chris McKay, David Grinspoon, Jonathan Lunine, Carolyn Porco, Laurie Leshin, Guy Consolmagno, Peter Smith, Alan Boss, Geoff Marcy, Debra Fischer, Sara Seager, David Charbonneau, Vikki Meadows, Jill Tarter, Seth Shostak, Ray Kuruzwel, Nick Bostrom, Paul Davies, Martin Rees, Ben Bova, Jennifer Michael Hecht
2010 247 x 174 mm 418pp 115 b/w illus.
978-0-521-51492-7 Hardback £19.99
ebook available
www.cambridge.org/9780521514927

Talking about Life
Conversations on Astrobiology
Edited by Chris Impey
University of Arizona

With over 500 planets now known to exist beyond the Solar System, spacecraft heading for Mars, and the ongoing search for extraterrestrial intelligence, this timely book explores current ideas about the search for life in the Universe. It contains candid interviews with dozens of astronomers, geologists, biologists, and writers about the origin and range of terrestrial life and likely sites for life beyond Earth. The interviewees discuss what we’ve learnt from the missions to Mars and Titan, talk about the search for Earth clones, describe the surprising diversity of life on Earth, speculate about post-biological evolution, and explore what contact with intelligent aliens will mean to us. Covering topics from astronomy and planetary science to geology and biology, this book will fascinate anyone who has ever wondered ‘Are we alone?’

2010 228 x 152 mm 244pp
77 b/w illus. 9 colour illus.
978-0-521-19438-5 Hardback £25.00
www.cambridge.org/9780521194385

Planetary Sciences
Second edition
Imke de Pater
University of California, Berkeley
and Jack J. Lissauer
NASA-Ames Research Center

An authoritative introduction for graduate students in the physical sciences, this textbook has been substantially updated and improved. With over 300 exercises, it is ideal for courses in astronomy, planetary science and earth science. Color versions of many figures and movie clips
supplementing the text are available at www.cambridge.org/9780521853712.

Reviews of the first edition:
'...the book covers the important physical processes in all areas of planetary science. My favorite derivations are all there, along with the important figures, graphs, and tables that show the data. The numerous homework problems challenge the student to understand the equations and think independently. The book sets the standard for what we should be teaching those who want to become professionals in this field. I will recommend it to all my students and look forward to using it in my courses.'
Andrew P. Ingersoll, California Institute of Technology


2010 246 x 189 mm 674pp 487 b/w illus. 43 colour illus. 48 tables 318 exercises 978-0-521-87862-3 Hardback £45.00
eBook available www.cambridge.org/9780521878623

TEXTBOOK
Stellar Evolution and Nucleosynthesis
Sean G. Ryan
University of Hertfordshire

'...stellar evolution and nucleosynthesis provides a fine, insightful, and remarkably complete introduction to modern astrophysics that is both well written and illustrated. A logical flow, attention to detail, worked examples, and end-of-chapter summaries are especially good in creating an effective learning environment.'
Jim Kaler, Professor Emeritus of Astronomy, University of Illinois


2010 263 x 210 mm 236pp 50 exercises 978-0-521-119609-3 Hardback £75.00
978-0-521-13330-3 Paperback £35.00
www.cambridge.org/9780521119609

The Scientific Exploration of Mars
Fredric W. Taylor
University of Oxford

Unique book describing the past, present and future of Mars exploration for anyone interested in this fascinating planet.
2009 246 x 189 mm 362pp 128 b/w illus. 54 colour illus. 978-0-521-82956-4 Hardback £30.00
www.cambridge.org/9780521829564

Megaflooding on Earth and Mars
Edited by Devon M. Burr
University of Tennessee
Paul A. Carling
University of Southampton
and Victor R. Baker
University of Arizona

A research summary of the causes and effects of megaflooding on Earth and Mars, for hydrologists, planetary scientists and engineers.
2009 276 x 219 mm 330pp 57 b/w illus. 32 colour illus. 12 tables 978-0-521-86852-5 Hardback £85.00
eBook available www.cambridge.org/9780521868525

Origins of Life in the Universe
Robert Jastrow
Mount Wilson Institute, Pasadena
and Michael Rampino
New York University

The most fascinating questions on the history of the Universe are answered in this text.

'This book is a great introduction to the grand journey of 14 billion years of cosmic evolution from the Big Bang to human evolution! It presents a sweeping synthesis of the sciences ranging from astronomy and astrophysics to planetology, geology, climatology, evolution of life and molecular biology and makes an original and exciting text for a general introductory science course for non-science majors. The text flows smoothly from one topic to another, covering the latest developments in many fields. ... this book has the potential to become a well-received text, and the basis for a popular, exciting science course.'
Vivien Gornitz, NASA Goddard Institute for Space Studies

Planetary Crusts
Their Composition, Origin and Evolution
S. Ross Taylor
Australiasian National University, Canberra and Scott McLennan
State University of New York, Stony Brook
This comprehensive reference volume surveys the development of crusts on solid planets and satellites in the solar system.
Cambridge Planetary Science, 10
2008. 247 x 174 mm 400pp
978-0-521-84186-3 Hardback £75.00
ebook available www.cambridge.org/9780521841863

Earth science

Geoinformatics
Cyberinfrastructure for the Solid Earth Sciences
Edited by G. Randy Keller
University of Oklahoma and Chaitanya Baru
University of California, San Diego
Advanced information technology infrastructure is being increasingly employed in the Earth sciences. Geoinformatics uses a series of case studies to provide a fascinating and accessible introduction to this emerging field and an invaluable reference for researchers interested in developing new cyberinfrastructure projects of their own.
Cambridge Geoinformatics
2011. 247 x 174 mm 400pp
978-0-521-89715-0 Hardback £80.00
Publications available www.cambridge.org/9780521897150

Exploring the Origin, Extent, and Future of Life
Philosophical, Ethical and Theological Perspectives
Edited by Constance M. Bertka
Carnegie Institution of Washington, Washington DC
Philosophers, historians, ethicists, and theologians provide the perspectives of their fields on astrobiology for graduate students and researchers.
Cambridge Astrobiology, 4
2009. 247 x 174 mm 366pp 10 b/w illus.
978-0-521-86363-6 Hardback £69.00
ebook available www.cambridge.org/9780521863636


Planetary Crusts
Pamela Gales Conrad
NASA-Goddard Space Flight Center
Planetary Habitability approaches habitability holistically and utilizes a complete range of environmental data including physical features as well as chemical signals. Highlighting the important of analogue studies, it is a practical manual for field astrobiologists and an important reference for those involved in planetary exploration.
Cambridge Astrobiology
2011. 247 x 174 mm 400pp
978-0-521-51671-6 Hardback c. £70.00
Publications available www.cambridge.org/9780521516716

The Geology of Australia
Second edition
David Johnson
James Cook University, North Queensland
This book provides a vivid account of the evolution of the Australian continent over the last 4400 million years.
2009. 230 x 240 mm 360pp 46 b/w illus.
978-0-521-76741-5 Paperback £40.00
www.cambridge.org/9780521767415

Geostatistics Explained
An Introductory Guide for Earth Scientists
Steve McKillup
Central Queensland University and Melinda Darby Dyar
Mount Holyoke College, Massachusetts
This reader-friendly introduction to geostatistics demystifies complex concepts and makes formulas and statistical tests easy to apply. With wide-ranging examples from topics across the Earth and environmental sciences, and worked examples at the end of each chapter, this book can be used for undergraduate courses or for self-study and reference.

I can highly recommend this book based on my own experience with it, and can also imagine it being very useful for those teaching statistical methods to geoscientists.’’
Nina Kirchner, Stockholm University

Also of interest

NIST Handbook of Mathematical Functions
Edited by Frank W. J. Olver
University of Maryland and National Institute of Standards and Technology, Maryland
Daniel W. Lozier
National Institute of Standards and Technology, Maryland
Ronald F. Boisvert
National Institute of Standards and Technology, Maryland
and Charles W. Clark
National Institute of Standards and Technology, Maryland and University of Maryland

Modern developments in theoretical and applied science depend on knowledge of the properties of mathematical functions, from elementary trigonometric functions to the multitude of special functions. These functions appear whenever natural phenomena are studied, engineering problems are formulated, and numerical simulations are performed. They also crop up in statistics, financial models, and economic analysis. Using them effectively requires practitioners to have ready access to a reliable collection of their properties. This handbook results from a 10-year project conducted by the National Institute of Standards and Technology with an international group of expert authors and validators. Printed in full colour, it is destined to replace the outdated Handbook of Mathematical Functions, edited by Abramowitz and Stegun. Includes a DVD with a searchable PDF of each chapter.

“The NIST Handbook is indeed a monumental achievement, and the many, many individuals who participated in its creation and dissemination are to be congratulated and thanked.”

SIAM News


2010 279 x 215 mm 968pp 422 colour illus. 100 tables
978-0-521-19225-5 Mixed media product £65.00
978-0-521-14063-8 Mixed media product £35.00
www.cambridge.org/9780521192255

Building Scientific Apparatus
Fourth edition
John H. Moore
University of Maryland, College Park
Christopher C. Davis
University of Maryland, College Park
Michael A. Coplan
University of Maryland, College Park
and Sandra C. Greer
Mills College


2009 234 x 213 mm 662pp
978-0-521-87858-6 Hardback £45.00
www.cambridge.org/9780521878586

To too Smart for Our Own Good
The Ecological Predicament of Humankind
Craig Dilworth
Uppsala University, Sweden

A groundbreaking work explaining our ecological predicament in the context of the first scientific theory of humankind’s development.

2009 247 x 174 mm 546pp
60 b/w illus. 2 tables
978-0-521-76436-0 Hardback £55.00
978-0-521-74352-5 Paperback £20.99
7 b/w illus. 8 colour illus. 145 tables
2009 216 x 138 mm 286pp
60 b/w illus. 2 tables
eBooks available at www.cambridge.org/ebookstore

The Art of Being a Scientist
A Guide for Graduate Students and their Mentors
Roel Snieder
Colorado School of Mines and Ken Larner
Colorado School of Mines

A hands-on guide for graduate students, junior researchers and mentors for perfecting the practical skills needed for a successful research career.

2009 228 x 152 mm 296pp 6 b/w illus.
978-0-521-76436-0 Hardback £55.00
978-0-521-74352-5 Paperback £20.99
www.cambridge.org/9780521764360

The Cambridge Handbook of Earth Science Data
Paul Henderson
University College London and Gideon M. Henderson
University of Oxford

A compact and easy-to-use compilation of fundamental facts and figures about the Earth – for students, researchers and professionals.

2009 216 x 138 mm 286pp
7 b/w illus. 8 colour illus. 145 tables
eBooks available at www.cambridge.org/9780521693172

Earth science / Also of interest
Also of interest

in measurement and uncertainties, whether they are beginner or an old hand.’

Jeffrey Tapping


2006 247 x 174 mm 248pp
100 b/w illus. 30 tables 35 exercises
978-0-521-60579-3 Paperback £25.99

eBook available
www.cambridge.org/9780521605793
<table>
<thead>
<tr>
<th>Authors</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auge, Jay</td>
<td>6</td>
</tr>
<tr>
<td>Albarède, Francis</td>
<td>7</td>
</tr>
<tr>
<td>Alcántara-Ayala, Inasema</td>
<td>5</td>
</tr>
<tr>
<td>Allègre, Claude J.</td>
<td>7</td>
</tr>
<tr>
<td>Ambroseys, Nicholas</td>
<td>8</td>
</tr>
<tr>
<td>Anderson, Robert S.</td>
<td>5</td>
</tr>
<tr>
<td>Anderson, Suzanne P.</td>
<td>5</td>
</tr>
<tr>
<td>Art of Being a Scientist, The</td>
<td>13</td>
</tr>
<tr>
<td>Artemyeva, Irina</td>
<td>1</td>
</tr>
<tr>
<td>Artist and the Scientists, The</td>
<td>3</td>
</tr>
<tr>
<td>Atlas of the Galilean Satellites</td>
<td>10</td>
</tr>
<tr>
<td>Avseth, Per</td>
<td>8</td>
</tr>
<tr>
<td>B</td>
<td>Baker, Victor R.</td>
</tr>
<tr>
<td>Baru, Chaitanya</td>
<td>12</td>
</tr>
<tr>
<td>Bertka, Constance M.</td>
<td>12</td>
</tr>
<tr>
<td>Biomembranes and Fossils Through Time</td>
<td>3</td>
</tr>
<tr>
<td>Blake, Stephen</td>
<td>9</td>
</tr>
<tr>
<td>Boggs, J., Sam</td>
<td>2</td>
</tr>
<tr>
<td>Boisvert, Ronald F.</td>
<td>13</td>
</tr>
<tr>
<td>Borchert, Roger D.</td>
<td>9</td>
</tr>
<tr>
<td>Breviary of Seismic Tomography, A</td>
<td>9</td>
</tr>
<tr>
<td>Bridge, John</td>
<td>2</td>
</tr>
<tr>
<td>Buatois, Luis</td>
<td>3</td>
</tr>
<tr>
<td>Building Scientific Apparatus</td>
<td>13</td>
</tr>
<tr>
<td>Burr, Devon M.</td>
<td>11</td>
</tr>
<tr>
<td>Burton, Kevin</td>
<td>9</td>
</tr>
<tr>
<td>Cambridge Handbook of Earth Science</td>
<td>13</td>
</tr>
<tr>
<td>Data, The</td>
<td>13</td>
</tr>
<tr>
<td>Carling, Paul A.</td>
<td>11</td>
</tr>
<tr>
<td>Carlini, Alfredo A.</td>
<td>4</td>
</tr>
<tr>
<td>Caminorvan Evolution</td>
<td>4</td>
</tr>
<tr>
<td>Challenged by Carbon</td>
<td>8</td>
</tr>
<tr>
<td>Chapman, Neil A.</td>
<td>6</td>
</tr>
<tr>
<td>Chemical Oceanography and the Marine Carbon Cycle</td>
<td>7</td>
</tr>
<tr>
<td>Clark, Charles W.</td>
<td>13</td>
</tr>
<tr>
<td>Clarke, G. L.</td>
<td>6</td>
</tr>
<tr>
<td>Cockell, Charles</td>
<td>4</td>
</tr>
<tr>
<td>Computational Methods for Geodynamics</td>
<td>1</td>
</tr>
<tr>
<td>Concise Geologic Time Scale, The</td>
<td>2</td>
</tr>
<tr>
<td>Connor, Charles B.</td>
<td>6</td>
</tr>
<tr>
<td>Connor, Laura J.</td>
<td>6</td>
</tr>
<tr>
<td>Conrad, Pamela Gales</td>
<td>12</td>
</tr>
<tr>
<td>Coplan, Michael A.</td>
<td>13</td>
</tr>
<tr>
<td>Corfield, Richard</td>
<td>4</td>
</tr>
<tr>
<td>Cosmochemistry</td>
<td>11</td>
</tr>
<tr>
<td>Cosmogenic Nuclides</td>
<td>7</td>
</tr>
<tr>
<td>Cuff, Jean-Pierre</td>
<td>3</td>
</tr>
<tr>
<td>D</td>
<td>Dauphin, Yannicke</td>
</tr>
<tr>
<td>Davidson-Arnott, Robin</td>
<td>5</td>
</tr>
<tr>
<td>Davies, Geoffrey F.</td>
<td>1</td>
</tr>
<tr>
<td>Davis, Christopher C.</td>
<td>13</td>
</tr>
<tr>
<td>Davis, Paul M.</td>
<td>9</td>
</tr>
<tr>
<td>de Pater, Imke</td>
<td>10</td>
</tr>
<tr>
<td>Demicco, Robert</td>
<td>2</td>
</tr>
<tr>
<td>Diatoms, The</td>
<td>3</td>
</tr>
<tr>
<td>Dilworth, Craig</td>
<td>13</td>
</tr>
<tr>
<td>Dinosaurs</td>
<td>4</td>
</tr>
<tr>
<td>Dryland Climatology</td>
<td>4</td>
</tr>
<tr>
<td>Dunai, Tibor J.</td>
<td>7</td>
</tr>
<tr>
<td>Dvorkin, Jack</td>
<td>9</td>
</tr>
<tr>
<td>Dyr, Melinda Darby</td>
<td>12</td>
</tr>
<tr>
<td>E</td>
<td>Earth Surface Processes, Landforms and Sediment Deposits</td>
</tr>
<tr>
<td>Earthquakes in the Mediterranean and Middle East</td>
<td>8</td>
</tr>
<tr>
<td>Eastman, Roger D.</td>
<td>9</td>
</tr>
<tr>
<td>Edwards, Neil</td>
<td>4</td>
</tr>
<tr>
<td>Emberton-Hamlet, Christine</td>
<td>5</td>
</tr>
<tr>
<td>Emerson, Steven</td>
<td>7</td>
</tr>
<tr>
<td>Erosion and Sedimentation</td>
<td>2</td>
</tr>
<tr>
<td>Eruptions that Shook the World</td>
<td>5</td>
</tr>
<tr>
<td>Estimating Groundwater Recharge</td>
<td>6</td>
</tr>
<tr>
<td>Evolution of Matter, The</td>
<td>7</td>
</tr>
<tr>
<td>Exploring the Origin, Extent, and Future of Life</td>
<td>12</td>
</tr>
<tr>
<td>F</td>
<td>Farnsworth, Katherine L.</td>
</tr>
<tr>
<td>Fastovsky, David E.</td>
<td>4</td>
</tr>
<tr>
<td>Fossen, Haakon</td>
<td>14</td>
</tr>
<tr>
<td>Frenkel, R. B.</td>
<td>14</td>
</tr>
<tr>
<td>Friscia, Anthony</td>
<td>4</td>
</tr>
<tr>
<td>G</td>
<td>Geochemistry</td>
</tr>
<tr>
<td>Geoinformatics</td>
<td>12</td>
</tr>
<tr>
<td>Geological Fluid Dynamics</td>
<td>7</td>
</tr>
<tr>
<td>Geology of Australia, The</td>
<td>12</td>
</tr>
<tr>
<td>Geomorphological Hazards and Disaster Prevention</td>
<td>5</td>
</tr>
<tr>
<td>Geomorphology</td>
<td>5</td>
</tr>
<tr>
<td>Geomorphology and Global Environmental Change</td>
<td>5</td>
</tr>
<tr>
<td>Geostatistics Explained</td>
<td>12</td>
</tr>
<tr>
<td>Geyra, Taras</td>
<td>1</td>
</tr>
<tr>
<td>Goswami, Anjali</td>
<td>4</td>
</tr>
<tr>
<td>Goudie, Andrew S.</td>
<td>5</td>
</tr>
<tr>
<td>Gradstein, Felix M.</td>
<td>2</td>
</tr>
<tr>
<td>Greer, Sandra C.</td>
<td>13</td>
</tr>
<tr>
<td>Gudmundsson, Agust</td>
<td>1</td>
</tr>
<tr>
<td>H</td>
<td>Harris, Nigel</td>
</tr>
<tr>
<td>Healy, Richard W.</td>
<td>9</td>
</tr>
<tr>
<td>Heat Generation and Transport in the Earth</td>
<td>8</td>
</tr>
<tr>
<td>Hedges, John</td>
<td>7</td>
</tr>
<tr>
<td>Henderson, Gideon M.</td>
<td>13</td>
</tr>
<tr>
<td>Henderson, Paul</td>
<td>13</td>
</tr>
<tr>
<td>Hess, Gary R.</td>
<td>11</td>
</tr>
<tr>
<td>I</td>
<td>Image Registration for Remote Sensing</td>
</tr>
<tr>
<td>Impy, Chris</td>
<td>10</td>
</tr>
<tr>
<td>Introduction to Coastal Processes and Geomorphology</td>
<td>5</td>
</tr>
<tr>
<td>Introduction to Geomorphology</td>
<td>5</td>
</tr>
<tr>
<td>Introduction to Numerical Geodynamic Modelling</td>
<td>1</td>
</tr>
<tr>
<td>Introduction to Our Dynamic Planet, An</td>
<td>9</td>
</tr>
<tr>
<td>Introduction to Seismology</td>
<td>8</td>
</tr>
<tr>
<td>Introduction to the Earth-Life System, An</td>
<td>4</td>
</tr>
<tr>
<td>Introduction to Uncertainty in Measurement, An</td>
<td>14</td>
</tr>
<tr>
<td>Ismail-Zadeh, Ali</td>
<td>1</td>
</tr>
<tr>
<td>Isotope Geology</td>
<td>7</td>
</tr>
<tr>
<td>J</td>
<td>Jastrow, Robert</td>
</tr>
<tr>
<td>Jaupart, Claude</td>
<td>8</td>
</tr>
<tr>
<td>Johnson, David</td>
<td>12</td>
</tr>
<tr>
<td>Jones, Barrie W.</td>
<td>10</td>
</tr>
<tr>
<td>Julien, Pierre Y.</td>
<td>2</td>
</tr>
<tr>
<td>K</td>
<td>Kay, Richard F.</td>
</tr>
<tr>
<td>Keller, G. Randy</td>
<td>12</td>
</tr>
<tr>
<td>Kirkup, L.</td>
<td>14</td>
</tr>
<tr>
<td>Kramers, Jan</td>
<td>7</td>
</tr>
<tr>
<td>L</td>
<td>Lang, Kenneth R.</td>
</tr>
<tr>
<td>Larmer, Ken</td>
<td>13</td>
</tr>
<tr>
<td>Le Moigne, Jacqueline</td>
<td>9</td>
</tr>
<tr>
<td>Lissauer, Jack J.</td>
<td>10</td>
</tr>
<tr>
<td>Lithosphere</td>
<td>8</td>
</tr>
<tr>
<td>Lovell, Bryan</td>
<td>8</td>
</tr>
<tr>
<td>Loveridge, Robert</td>
<td>3</td>
</tr>
<tr>
<td>Lozier, Daniel W.</td>
<td>13</td>
</tr>
<tr>
<td>M</td>
<td>Madden, Richard H.</td>
</tr>
<tr>
<td>Mangano, M. Gabriela</td>
<td>3</td>
</tr>
<tr>
<td>Mantle Convection for Geologists</td>
<td>1</td>
</tr>
<tr>
<td>Mareschal, Jean-Claude</td>
<td>8</td>
</tr>
<tr>
<td>Martill, David</td>
<td>3</td>
</tr>
<tr>
<td>Mavko, Gary</td>
<td>8</td>
</tr>
<tr>
<td>McKillop, Steve</td>
<td>12</td>
</tr>
<tr>
<td>McNamara, Scott</td>
<td>12</td>
</tr>
<tr>
<td>McSween, Jr., Harry Y.</td>
<td>11</td>
</tr>
<tr>
<td>Megaflooding on Earth and Mars</td>
<td>11</td>
</tr>
<tr>
<td>Milliman, John D.</td>
<td>5</td>
</tr>
<tr>
<td>Moore, John H.</td>
<td>13</td>
</tr>
<tr>
<td>Mukerji, Tapan</td>
<td>8</td>
</tr>
<tr>
<td>N</td>
<td>Netanyahu, Nathan S.</td>
</tr>
<tr>
<td>Nicholson, Sharon E.</td>
<td>4</td>
</tr>
<tr>
<td>NIST Handbook of Mathematical Functions</td>
<td>13</td>
</tr>
<tr>
<td>Nolet, Guust</td>
<td>9</td>
</tr>
<tr>
<td>Norton, Andrew John</td>
<td>11</td>
</tr>
<tr>
<td>O</td>
<td>Ogg, Gabi</td>
</tr>
<tr>
<td>Ogg, James G.</td>
<td>2</td>
</tr>
<tr>
<td>Olver, Frank W. J.</td>
<td>13</td>
</tr>
<tr>
<td>Oppenheimer, Clive</td>
<td>5</td>
</tr>
<tr>
<td>Origins of Life in the Universe</td>
<td>11</td>
</tr>
<tr>
<td>P</td>
<td>Paleontology of Gran Barranca, The</td>
</tr>
<tr>
<td>Parkinson, Ian</td>
<td>9</td>
</tr>
<tr>
<td>Patiño Douce, Alberto</td>
<td>6</td>
</tr>
<tr>
<td>Petrology of Sedimentary Rocks</td>
<td>2</td>
</tr>
<tr>
<td>Phillips, Owen M.</td>
<td>7</td>
</tr>
<tr>
<td>Philipotts, Anthony</td>
<td>6</td>
</tr>
</tbody>
</table>
Index

Physical Principles of Sedimentary Basin Analysis ......................................................... 1

Physics of the Earth ................................................. 9

Planetary Crusts ................................................... 12

Planetary Habitability ........................................... 12

Planetary Sciences ............................................. 10

Planetary Tectonics ............................................. 2

Pluto ........................................................................ 10

Principles of Igneous and Metamorphic Petrology ......................................................... 6

Principles of Metamorphic Petrology ................................................. 6

Pterosauria, The .................................................. 3

Quantitative Seismic Interpretation ................................................. 8

Ragan, Donal M. ................................................... 2

Rampino, Michael ............................................... 11

Reservoir Geomechanics ........................................ 8

Rich, Thomas H. .................................................. 3

River Discharge to the Coastal Ocean ................................................. 5

Rock Fractures in Geological Processes ................................................. 1

Rock Physics Handbook, The ........................................ 9

Rogers, Nick .......................................................... 9

Ryan, Sean G. ..................................................... 11

Sandstone Landforms ........................................... 5

Scanlon, Bridget R. ............................................... 5

Schenk, Paul ....................................................... 10

Schultz, Richard A. ............................................. 2

Schuster, Gerard Thomas ....................................... 9

Scientific Exploration of Mars, The ................................................. 11

Seismic Interferometry ........................................... 9

Shearer, Peter M. .................................................. 8

Slaymaker, Olav .................................................... 5

Smol, John P. .................................................... 3

Snieder, Roel ....................................................... 13

Sorsaf, James E. ................................................... 3

Spencer, Thomas .................................................. 5

Stacey, Frank D. ................................................... 9

Stoermer, Eugene F. ........................................... 3

Structural Geology ................................................ 1, 2

Sutcliffe, Christopher ........................................... 7

Tackley, Paul ......................................................... 1

Talking about Life .................................................. 10

Taylor, Fredric W. .............................................. 11

Taylor, S. Ross ..................................................... 12

Thermodynamics of the Earth and Planets ................................................. 6

Tolstikhin, Igor ................................................... 7

Too Smart for Our Own Good ................................................. 13

Trusler, Peter ....................................................... 3

Unwin, David ..................................................... 3

Vernon, R. H. ..................................................... 6

Vickers-Rich, Patricia ........................................... 3

Viscoelastic Waves in Layered Media ................................................. 9

Volcanic and Tectonic Hazard Assessment for Nuclear Facilities ................................................. 6

Vucetich, Maria Guiomar ........................................... 4

Wangen, Magnus ............................................... 1

Watters, Thomas R. ............................................ 2

Weishampel, David B. ........................................... 4

Widdowson, Mike .............................................. 9

Woy, Robert A. L. ................................................ 5

Young, Ann R. M. ............................................... 5

Young, Robert W. ............................................... 5

Zoback, Mark D. ................................................... 8

Zoback, Mark D. ................................................... 8