Earth Sciences

A. Amendola, T. Ermolieva, J. Linnerooth-Bayer, R. Mechler, IIASA, Laxenburg, Austria (Eds)

**Integrated Catastrophe Risk Modelling**

Supporting Policy Processes

**Contents**

PART I Integrated modeling and risk sharing.
- Catastrophic Risk Management: Flood and Seismic Risks Case Studies.
- Managing Flash Flood Risk to Vienna and its Subway System.
- Uncertainty and Modeling.
- Handling Multiple Criteria in Flood Management.
- PART II Economic developments under catastrophes.
- Economic Growth under Catastrophes.
- Evaluation of Damns for Flood Protection: Economic and Equity Aspects.
- The CATSIM Model for Assessing Policy Response to Disasters in Developing Countries.
- Modelling the Economic Effects of Disaster Risk in Nepal.
- PART III Flood risk management for the Tisza River Basin in Hungary.
- Catastrophe Models and Policy Processes.
- Managing Flood Risk in the Hungarian Tisza River Basin.
- An Introduction.
- Social Indicators of Vulnerability to Floods.
- An Empirical Case Study in Two Upper Tisza Flood Basins.
- Consensus by Simulation: A Flood Model for Participatory Policy.
- A Risk-Based Decision Analytic Approach to Assessing Multi-Stakeholder Policy Problems.
- Financial Instruments in Integrated Catastrophe Flood Management: Demand for Contingent Credits.
- Flood Loss Considerations and Adaptation Strategies due to Climate Change in Hungary and the Tisza Region.
- Conclusion.

**Fields of interests**

Natural Hazards; Economics/Management Science, general; Sustainable Development

**Target groups**

Research

**Product category**

Monograph

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D. B. Brinkman, Royal Tyrrell Museum, Drumheller, AB, Canada; P. A. Holroyd, University of California, Berkeley, CA, USA; J. D. Gardner, Royal Tyrrell Museum, Drumheller, AB, Canada (Eds)

**Morphology and Evolution of Turtles**

This volume celebrates the contributions of Dr. Eugene Gaffney to the study of turtles, through a diverse and complementary collection of papers that showcases the latest research on one of the most intriguing groups of reptiles. A mix of focused and review papers deals with numerous aspects of the evolutionary history of turtles, including embryonic development, origins, early diversification, phylogenetic relationships, and biogeography.

**Features**

- Looks at the origin of turtles from a paleontological and embryological perspective.
- Information on previously known and new taxa gives insights into the relationships, paleodiversity, and paleobiogeography of fossil turtles.
- Includes historical studies and documents variation in turtle shells, skeletal pathologies, and disease.

**Contents**

Part I. Perspectives on the Life and Accomplishments of Eugene S. Gaffney.
- Part II. The Origin of Turtles.
- Part III. The Early Diversification of Turtles.
- Part IV. Plaurodire Diversity and Biogeography.
- Part V. Diversity, Biogeography, and Paleobiology of Late Cretaceous and Tertiary Turtles.
- Part VI. Pathologies, Anomalies, and Variation in Turtle Skeletons.

**Fields of interests**

Paleontology; Evolutionary Biology; Vertebrates

**Target groups**

Research

**Product category**

Contributed volume

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P. Burnard, Centre National de la Recherche Scientifique, Vandoeuvre-lès-Nancy, France (Ed)

**The Noble Gases as Geochemical Tracers**

The twelve chapters of this volume aim to provide a complete manual for using noble gases in terrestrial geochemistry, covering applications which range from high temperature processes deep in the Earth’s interior to tracing climatic variations using noble gases trapped in ice cores, groundwaters and modern sediments.

**Features**

- Analytical techniques and data interpretation within the same volume.
- Entire range of potential applications of noble gases to terrestrial geochemistry.
- Contributors are all leaders in their respective fields.

**Contents**

1. Introductory Chapter.
- 2. Noble Gases in ice cores: Indicators of the Earth’s climate history.
- 3. Ocean circulation traced by noble gases.
- 5. Noble gases as environmental tracers in porewater of lacustrine or oceanic sediments and in fluid inclusions of stalagmites.
- 6. Extraterrestrial He in sediments: From recorder of asteroid collisions to timekeeper of global environmental changes.
- 7. Application of noble gases to the viability of CO2 storage.
- 10. Inclusion trapped fluids: tracing ancient fluids using noble gases.

**Fields of interests**

Geochemistry; Chemistry/Food Science, general; Environmental Chemistry

**Target groups**

Research

**Product category**

Contributed volume

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Due August 2012

2012. X, 280 p. 90 illus. (Advances in Natural and Technological Hazards Research, Volume 32)

Hardcover
- approx. € (D) 106,95 | € (A) 109,95 | sFr 143,50
- ISBN 978-94-007-2225-6

Due June 2012

2012. XXXIV, 1624 p. 239 illus., 7 in color. (Vertebrate Paleobiology and Paleoanthropology) Hardcover
- € (D) 106,95 | € (A) 109,95 | sFr 133,50
- ISBN 978-94-007-4308-3

Due April 2012

2012. Approx. 500 p. 204 illus., 90 in color. (Advances in Isotope Geochemistry) Hardcover
- € (D) 139,05 | € (A) 142,94 | sFr 173,00
- ISBN 978-3-642-28835-7

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Solid Waste Management
Principles and Practice
Solid waste was already a problem long before water and air pollution issues attracted public attention. Historically the problem associated with solid waste can be dated back to prehistoric days. Due to the invention of new products, technologies and services the quantity and quality of the waste has changed over the years. Waste characteristics not only depend on income, culture and geography but also on a society’s economy and, situations like disasters that affect that economy. There was tremendous industrial activity in Europe during the industrial revolution.

Features
- Includes history, psychology, economics of solid waste
- Discusses variation in approaches to tackle solid waste over time and region
- Deals with biomedical waste, hazardous waste, disaster waste, waste from electrical and electronic waste, safety issues, radioactive waste and lively hood

Contents

Fields of interests
Environmental Science and Engineering; Waste Technology; Environmental Engineering/Biotechnology

Target groups
Research

Product category
Monograph

Due August 2012
2012. Approx. 490 p. (Environmental Science and Engineering / Environmental Science) Hardcover

Due July 2012
2012. X, 480 p. 300 illus. in color. Hardcover
V. Novák, Slovak Academy of Sciences, Bratislava, Slovakia

Evapotranspiration in the Soil-Plant-Atmosphere System

Contents
**Earth System Processes and Disaster Management**

**Contents**

**Fields of interests**
Earth System Sciences; Climate Change; Climate Change

**Target groups**
Research

**Product category**
Monograph

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**Tsunami and Groundwater Contamination**

**The goal of this monograph is to disseminate a fundamental understanding of the physical processes of saltwater contamination of shallow sandy aquifers due to an event like December 2004 tsunami or a storm surge event like Hurricane Katrina in the United States in 2005. The main objectives of this book are, 1. Describe the processes occurring in the unstable phenomena associated with tsunami contamination and its nature 2. Disseminate knowledge on parameters which influence saltwater plume migration, use of field experiments, physical experiments and computational modeling, 3. Provide guidelines for mitigation of such contamination and water use after such incident**

**Features**
- Basic theory and applications of the density-dependent flow and transport in coastal regions
- Particular application to tsunami like situations which has not been covered in other text books
- Very few books available on the subject explained in a manner that graduate students and practitioners can understand
- Actual pictures from the December 2004 tsunami

**Contents**

**Fields of interests**
Geophysics/Geodesy; Meteorology/Climatology; Oceanography

**Target groups**
Research

**Product category**
Monograph