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## Journals

### International Journal of Rock Mechanics and Mining Sciences

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**Editor-in-Chief:**  
**J. Hudson, Imperial College, London, UK**

Publishing high quality papers on the subject of rock mechanics and the application of rock mechanics principles and techniques to mining and civil engineering projects built on or in rock masses. These projects include slopes, open-pit mines, quarries, shafts, tunnels, caverns, underground mines, metro systems, dams and hydro-electric stations, geothermal energy and radioactive waste disposal.

**ISSN 1365-1609, 2004, Volume 41, (8 issues), [www.elsevier.com/locate/ijmms](http://www.elsevier.com/locate/ijmms)**

### Computers and Geotechnics

**Editor-in-Chief:**  
**G.N. Pande, University of Wales Swansea, UK**

*Computers and Geotechnics* provides an up-to-date reference to the engineers and researchers engaged in computer aided analysis, design and research in geotechnical engineering. The journal is intended for an expeditious dissemination of new developments in the broad areas of soil and rock mechanics.

**ISSN 0266-352X, 2004, Volume 31, (8 issues), [www.elsevier.com/locate/compgeo](http://www.elsevier.com/locate/compgeo)**

### Computer Methods in Applied Mechanics and Engineering

Rising Impact Factor - WAS 0.957 NOW 1.252 © ISI Impact Factor 2004

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*Computer Methods in Applied Mechanics and Engineering* was founded over three decades ago and remains one of the leading journals in its field. It embraces all types of computer methods for the simulation of complex physical problems leading to the analysis and design of engineering products and systems.

**ISSN 0045-7825, 2004, Volume 193, (52 issues), [www.elsevier.com/locate/cma](http://www.elsevier.com/locate/cma)**

### Geotextiles and Geomembranes

Rising Impact Factor - WAS 0.176 NOW 0.646 © ISI Impact Factor 2004

**Editor:**  
**R. K. Rowe, Queen's University, Kingston, Canada**

Geotextiles are permeable fabrics which, when used in association with soil, have the ability to separate, filter, reinforce, protect or drain. All have a wide range of applications and are currently used to advantage in many civil engineering applications including roads, airfields, railroads, embankments, retaining structures, reservoirs, canals, dams, bank protection and coastal engineering. Current reference books and even manufacturers' sponsored publications tend to date very quickly and the need for a vehicle to bring together and discuss the growing body of technology now available has become evident.

**ISSN 0266-1144, 2004, Volume 22, (6 issues), [www.elsevier.com/locate/geotextmem](http://www.elsevier.com/locate/geotextmem)**

### Engineering Geology

Rising Impact Factor - WAS 0.516 NOW 0.687 © ISI Impact Factor 2004

Over 85,000 articles were downloaded from ScienceDirect in 2003

**Editors-in-Chief:**  
**M. Arnold, Ecole des Mines de Paris et Ecole des Ponts et Chaussées, France**

**E. Krinitzky, Vicksburg, USA**

The journal is an international medium for the publication of original studies, case histories, and comprehensive reviews in the field of engineering geology. Included are all geological studies that can be relevant to engineering, environmental concerns and safety.

**ISSN: 00137952, 2004, Volumes 70-75, (24 issues), [www.elsevier.com/locate/enggeo](http://www.elsevier.com/locate/enggeo)**

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ISSN 0167-4730  
2004: Volume 26 (4 issues)  
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ISSN 0263-8231 2004: Volume 42, 12 issues  
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# Geo-Engineering

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**Edited By:**  
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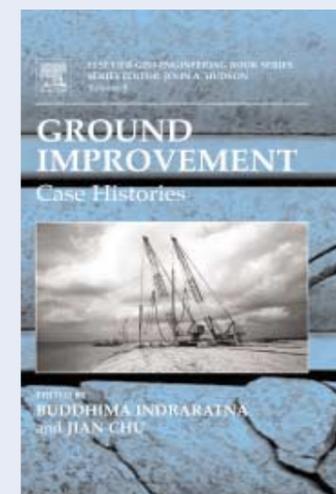
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This edited compilation contains a collection of chapters from invited experts in various areas of ground improvement, who have illustrated the basic concepts and applications of different techniques using real projects that they have been involved in. Case histories from many countries across the globe are explored.

The volume has been divided into 5 topical themes:

- Preloading and Vertical Drains: 8 chapters
- Modification by Chemical Admixtures: 7 chapters
- Physical Modification Methods including Grouting, Compaction and Drainage: 11 chapters
- Modification by Geosynthetics and other Inclusions: 5 chapters
- Electro-kinetic, Thermal and Explosion based Techniques: 5 chapters

Each chapter presents one or more cases on specific ground improvement techniques. The chapters are all written by international experts from both academia and industry, and the relevant concepts and theories are elucidated throughout. Different soils or ground materials are discussed including slurry, soft clays, sands, tailings and waste materials, and various improvement techniques are presented. Most chapters provide an overview of the specific technology followed by applications, and in some cases comprehensive back analysis through numerical modelling. Environmental and economic advantages are also addressed. In addition, each chapter provides an extensive list of references to guide the reader to related titles and research of interest.



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*J.A. Hudson*

Professor John A Hudson FREng  
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## Volume 1

### Stability Analysis and Modeling of Underground Excavations in Fractured Rocks



**Professor W. Zhu, Chinese Academy of Sciences, Wuhan, China**

**Dr J. Zhao, Nanyang Technological University, Singapore**

- Providing practical solutions to the challenge of modeling and analyzing rock masses
- Consolidates a wealth of previously published technical papers on the subject and introduces previously unseen material

This authoritative title is a key reference for any Geo-engineer. Rock masses differ considerably from man made materials, and can vary with time location and direction. As a result there is a strong need to capture these variations via modeling and analysis

Zhao and Zhu provide an expert introduction into the techniques and analytical methods needed for underground excavations in fractured rock mass. Bringing together previously published technical papers and new material presented for the first time to provide a comprehensive and up-to-date reference

**ISBN: 0-08-043012-0, Dec 2003, Hardbound, 324 pages, £99.99 / \$150 / €150**

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## Volume 2 NEW

### Coupled Thermo-Hydro-Mechanical Processes in Geo-systems

**Editors**

**Professor O. Stephansson, Potsdam**

**Professor J. Hudson, Imperial College**

**Dr Lanru Jing, KTH Stockholm**

Coupled THMC processes are an exciting area in Geo-Engineering and here uniquely collected is the latest information on developments in the numerical modelling representing the basic physics. From the GeoProc 2003 conference held in Stockholm October 2003. This may include the effects of heat, water, mechanics and chemistry. The environmental issues around radioactive waste disposal deep in rock, for example and the search for new reserves of oil and gas are covered in detail.

All contributions were carefully reviewed and edited. This is an unusually high quality collection of leading-edge information not elsewhere available in edited and coherent form.

**ISBN: 0-08-044525-X, Sept 2004, Hardbound, 800 pages, £143 / \$215 / €215**

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## Engineering Rock Mechanics: An Introduction to the Principles



**J.P. Harrison and J.A. Hudson, both at Imperial College of Science, Technology and Medicine, London, UK**

Engineering rock mechanics is the discipline used to design structures built in rock. These structures encompass building foundations, dams, slopes, shafts, tunnels, caverns, hydroelectric schemes, mines, radioactive waste repositories and geothermal energy projects: in short, any structure built on or in a rock mass. Despite the variety of projects that use rock engineering, the principles remain the same. *Engineering Rock Mechanics* clearly and systematically explains the key principles behind rock engineering. The book covers the basic rock mechanics principles: how to study the interactions between these principles and a discussion on the fundamentals of excavation and support and the application of these in the design of surface and underground structures. *Engineering Rock Mechanics* is recommended as an across-the-board source of information for the benefit of anyone involved in rock mechanics and rock engineering. The book particularly strives to provide a deep understanding of all the key subjects to create an essential reference tool.

**ISBN: 0-08-041912-7, 1997, Hardbound, 456 pages, £70 / \$105 / €105**

**ISBN: 0-08-043864-4, 1997, Paperback, 456 pages, £26.67 / \$40 / €40**

[www.elsevier.com/locate/isbn/0080419127](http://www.elsevier.com/locate/isbn/0080419127)

## Engineering Rock Mechanics Part II: Illustrative Worked Examples



**J.P. Harrison and J.A. Hudson, both at Imperial College of Science, Technology and Medicine, London, UK**

*Engineering Rock Mechanics Part II: Illustrative Worked Examples* can be used as an independent book or alternatively it complements an earlier publication called *Engineering Rock Mechanics: An Introduction to the Principles* by the same authors.

It contains illustrative worked examples of engineering rock mechanics in action as the subject applies to civil, mining, petroleum and environmental engineering. It covers the necessary understanding and the key techniques supporting the rock engineering design of structural foundations, dams, rock slopes, wellbores, tunnels, caverns, hydroelectric schemes and mines. There is a question and answer presentation with the question and answer sets collated into twenty chapters which match the subject matter of the first book. Chapters 1 - 13 are on rock mechanics principles and Chapters 14 - 20 are on applications in rock engineering.

Thus, the book serves as an illustrated guide and explanation of the key rock mechanics principles and techniques for students, teachers, researchers, clients, consulting engineers and contractors.

**ISBN: 0-08-043010-4, 2000, Hardbound, 324 pages, £100 / \$150 / €150**

## Rock Mass Classification A Practical Approach in Civil Engineering



**B. Singh, Department of Civil Engineering, University of Roorkee, India**

**R.K. Goel, Central Mining Research Institute, CBRI Campus, India**

*Rock Mass Classifications - A Practical Approach in Civil Engineering* was written in response to the many unanswered questions regarding this subject. Questions such as - Is Classification reasonably reliable? Can it be successful in crisis management of geohazards? Can a single Classification system be general for all rock structures? Is Classification a scientific approach? Laborious field research was undertaken in the Himalayan mountains by a team of scientists from the Central Mining Research Institute (CMRI), University of Roorkee (UOR), Central Soil and Material Research Station (CSMRS), U.P. Irrigation Research Institute (UPIRI), and Norwegian Geotechnical Institute (NGI) to answer these questions.

**ISBN: 0-08-043013-9, 1999, Hardbound, 282 pages, £79 / \$119 / €119**

[www.elsevier.com/locate/isbn/0080430139](http://www.elsevier.com/locate/isbn/0080430139)

## Mechanics of Fluid-Saturated Rocks NEW



**Edited by Yves Gueguen, ENS, Paris, France**

**Maurice Bouteica, Institut Français du Pétrole, Rueil-Malmaison Cedex, France**

- Covers the physical, chemical, and mechanical analysis of porous saturated rock deformation on both large and small scales
- Discusses the latest developments of importance to engineers and geologists
- Examines natural and direct applications
- Includes extensive bibliographies for each chapter

**ISBN: 0-12-305355-2, March 2004, Hardbound, 450 pages, £54.99 / \$89.95 / €89.95**

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## Paleoseismology

**Editor James McCalpin, GEO-HAZ Consulting, Inc., Estes Park, Colorado, U.S.A.**



Paleoseismology (the study of "ancient" earthquakes) has become an important component of seismic risk analysis, which is mandated for nuclear power plants, dams, waste repositories, and other critical structures. This book is the first in the English language to be devoted solely to paleoseismology. It summarizes the development of the field from the 1960s to the present, encompassing material that is currently widely dispersed in journal articles. The 10 chapters included in this text span the entire range of techniques currently used in paleoseismic reconstruction, and are contributed by active practitioners at the forefront of paleoseismic research

**ISBN: 0-12-481826-9, August 1998, Paperback, 588 pages, £36.99 / \$54.95 / €54.95**

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## Journals

### Soil Dynamics and Earthquake Engineering

- Rising Impact Factor - WAS 0.372 NOW 0.435 © ISI Impact Factor 2004
- Over 45,000 articles were downloaded from ScienceDirect in 2003

**Editors-in-Chief:**

**Professor M. Erdik, Bogazici University, Istanbul, Turkey**

**Professor W. Finn, Kagawa University, Takamatsu, Japan**

The journal aims to encourage and enhance the role of mechanics and other disciplines as they relate to earthquake engineering by providing opportunities for the publication of the work of applied mathematicians, engineers and other applied scientists involved in solving problems closely related to the field of earthquake and geotechnical engineering.

Emphasis is placed on new concepts and techniques, but case histories will also be published if they enhance the presentation and understanding of new technical concepts.

**ISSN: 0267-7261, 2004, Volume 24, (12 issues), [www.elsevier.com/locate/soildyn](http://www.elsevier.com/locate/soildyn)**



### Engineering Structures The Journal of Earthquake, Wind and Ocean Engineering

- Rising Impact Factor - WAS 0.521 NOW 0.717 © ISI Impact Factor 2004

- Over 105,000 articles were downloaded from ScienceDirect in 2003

**Editor-in-Chief:**

**P. Gould Washington University, St Louis, USA**

*Engineering Structures* provides a forum for a broad blend of scientific and technical papers to reflect the evolving needs of the structural engineer. Particularly welcome are contributions dealing with applications of structural engineering principles and theories in all areas of technology. The journal aspires to a broad and integrated coverage of the dynamic effects of wind, waves and earthquakes and of the modelling techniques whereby the structural response to these loadings may be computed.

**ISSN: 0141-0296, 2004, Volume 26, (14 issues) [www.elsevier.com/locate/engstruct](http://www.elsevier.com/locate/engstruct)**



### Tunnelling and Underground Space Technology Incorporating Trenchless Technology Research

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**Editorial Board**

**C. Rogers, E. Broch, R. Sterling, J. Zhao**

An international journal publishing authoritative articles encompassing the development of innovative uses of underground space and the results of quality research into improved, more cost-effective techniques for the planning, geo-investigation, design, construction, operation and maintenance of underground and earth-sheltered structures.

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