

New and Forthcoming Civil Engineering and Architecture 2012/13

URBAN TRAFFIC ENGINEERING AND STREETScape DESIGN

by **Michael G H Bell** (*Imperial College London, UK*), **Ioannis Kaparias** (*Imperial College London, UK*) & **Bill Mount** (*Retired, Royal Borough of Kensington and Chelsea, UK*)

This book presents a new approach to urban traffic engineering in an integrated, coherent and accessible way. The material on methods and practice is complemented by recent case studies to illustrate the challenges that confront urban traffic engineering schemes in practice. Although the history and traditions of urban traffic engineering differ greatly between countries, there is an emerging international consensus which this book tries to capture.

Readership: Researchers, academics, undergraduate students and post-graduate students in civil engineering and urban design.

300pp
978-1-84816-897-8 US\$69 £46
978-1-84816-898-5(ebook) US\$90

CONSTRUCTION TECHNOLOGY FOR TALL BUILDINGS (4th Edition)

by **Yit Lin Chew, Michael** (*National University of Singapore, Singapore*)

Highly
Recommended

This book introduces the latest construction practices and processes for tall buildings from foundation to roof. It attempts to acquaint readers with the methods, materials, equipment and systems used for the construction of tall buildings. This fourth edition also includes several new topics not covered in the previous edition.

Readership: Undergraduate students and practitioners in architecture, civil engineering, building, real estate, construction, project and facilities management, and quantity and land surveying.

450pp
978-981-4390-13-2(pbk) US\$78 £51

ARCTIC OFFSHORE ENGINEERING

by **Andrew Palmer** (*National University of Singapore*) & **Ken Croasdale** (*K R Croasdale & Associates Ltd, Canada*)

Highly
Recommended

There is an increasing need to construct engineering structures in the Arctic sea. The requirement is principally generated by the oil and gas industry, because of the substantial reserves that are known to existing offshore in the Beaufort Sea, the Caspian Sea, the Barents Sea, the Pacific Ocean off the cost of Sakhalin, the Canadian Arctic, and almost certainly elsewhere. Structures have to withstand the severe environmental forces generated by sea ice, a subject that is developing rapidly but is still far from completely understood. Underwater pipelines have to be safe against ice gouging and strudel scour, but also have to be constructed safely and economically. The social and human environment has to be understood and respected.

Readership: Professionals, academics, and graduate students in civil engineering.

300pp
978-981-4368-77-3 US\$108 £71
978-981-4368-78-0(ebook) US\$140

HIGHLIGHTS

ADVANCED ENGINEERING ANALYSIS

Variations and Functional Analysis with
Applications in Mechanics

by **Leonid P Lebedev** (*Victor A, Eremeyev*),
Michael J Cloud & **Michael J Cloud**
(*Lawrence Technological University, USA*)

Pg 2



FINITE ELEMENT METHODS FOR ENGINEERS (2nd Edition)

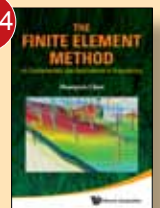
by **Roger T Fenner**
(*Imperial College London, UK*)

Pg 3

THE FINITE ELEMENT METHOD: Its Fundamentals and Applications in Engineering

by **Zhangxin Chen**
(*University of Calgary, Canada*)

Pg 4



FLOOD HAZARD IDENTIFICATION AND MITIGATION IN SEMI- AND ARID ENVIRONMENTS

edited by **Richard H French** (University of Texas at San Antonio, USA) & **Julianne J Miller** (Desert Research Institute, USA)



The purpose of this volume is to summarize the current state-of-the-art, from the viewpoint of engineering, in the identification and mitigation of flood hazard on alluvial fans; and to accomplish this a fundamental understanding of geology is required.

Readership: Graduate students and practitioners in the field of water resource management, environmental engineering and civil engineering.

350pp Aug 2011
978-981-4355-09-4 US\$118 £77
978-981-4355-10-0(ebook) US\$153

APPLIED UNCERTAINTY ANALYSIS FOR FLOOD RISK MANAGEMENT

edited by **Keith Beven** (Lancaster University, UK) & **Jim Hall** (Newcastle University, UK)

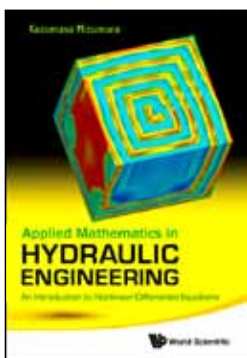
This volume provides an introduction for flood risk management practitioners, up-to-date methods for analysis of uncertainty and its use in risk-based decision making. It addresses decision making for both short term (real-time forecasting) and long term (flood risk planning under change) situations. It aims primarily at technical practitioners involved in flood risk analysis and flood warning, including hydrologists, engineers, flood modelers, risk analysts and those involved in the design and operation of flood warning systems.

Readership: Hydrologists, civil engineers, meteorologists, flood risk managers, environmental scientists, hydraulic engineers and consultants.

500pp Aug 2012
978-1-84816-270-9 US\$110 £73
978-1-84816-271-6(ebook) US\$179

APPLIED MATHEMATICS IN HYDRAULIC ENGINEERING: An Introduction to Nonlinear Differential Equations

by **Kazumasa Mizumura** (Kanazawa Institute of Technology, Japan)



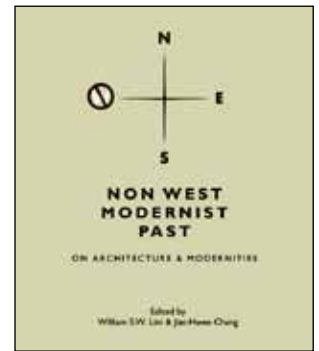
Applied Mathematics in Hydraulic Engineering is an excellent teaching guide and reference to treating nonlinear mathematical problems in hydraulic, hydrologic and coastal engineering. Undergraduates studying civil and coastal engineering, as well as analysis and differential equations, are started off applying calculus to the treatment of nonlinear partial differential equations, before given the chance to practice real-life problems related to the fields.

Readership: Undergraduate and graduate students studying civil and coastal engineering, and teachers and researchers in the above fields.

436pp May 2011
978-981-4299-55-8 US\$88 £57

NON WEST MODERNIST PAST: On Architecture & Modernities

edited by **William S W Lim** (AA Asia, Singapore & Asian Urban Lab, Singapore) & **Jiat-Hwee Chang**



This book provides a comprehensive historical and theoretical overview of modern architecture in regions outside the "West" — Europe and North America. It brings together contributions from leading scholars in the interdisciplinary fields of architecture history, architecture theory, area studies, sociology and cultural studies. It interrogates Eurocentric views of modern architecture as autonomous and homogeneous and posits a heteronomous and heterogeneous understanding of modern architecture.

Readership: Students and academics and researchers studying modern architecture, practitioners, heritage enthusiasts and general readers.

224pp Oct 2011
978-981-4365-94-9 US\$82 £54
978-981-4365-95-6(ebook) US\$107

INCOMPLETE URBANISM: A Critical Urban Strategy for Emerging Economies

by **William S W Lim** (AA Asia, Singapore & Asian Urban Lab, Singapore)

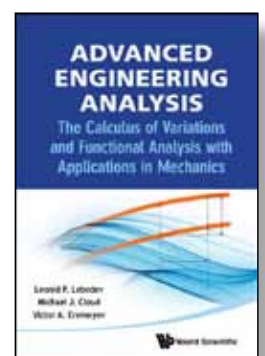
Incomplete Urbanism is a dynamic, hybrid interactive concept, which destabilizes the current architectural and urban theories and practices. Its main characteristics are indeterminacy, inconsistency and changeability, which are particularly challenging in the context of the New World Order and the fast emerging global digital network. It is a concept that can be effectively applied to any sizeable section of existing cities without the need for major readjustments and can be implemented at different rates in response to specific local conditions.

Readership: Graduate and undergraduate students majoring in architecture, the general public, and policy makers and economists.

160pp Nov 2011
978-981-4383-86-8 US\$80 £53
978-981-4383-87-5(ebook) US\$104

ADVANCED ENGINEERING ANALYSIS

Variations and Functional Analysis with Applications in Mechanics
by **Leonid P Lebedev** (Victor A, Eremeyev), **Michael J Cloud** & **Michael J Cloud** (Lawrence Technological University, USA)



Advanced Engineering Analysis is a textbook on modern engineering analysis, covering the calculus of variations, functional analysis, and control theory, as well as applications of these disciplines to mechanics. The book offers a brief and concise, yet complete explanation of essential theory and applications. It contains exercises with hints and solutions, ideal for self-study.

Readership: Academic and industry: engineers, students; advanced undergraduate in the field of mechanical engineering.

500pp Mar 2012
978-981-4390-47-7 US\$168 £111
978-981-4390-48-4(ebook) US\$218

ICP Fluid Mechanics - Vol. 3

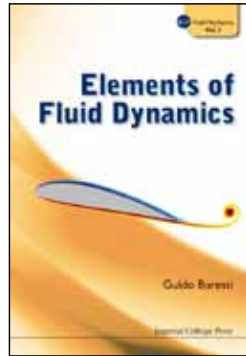
ELEMENTS OF FLUID DYNAMICS

by **Guido Buresti** (*University of Pisa, Italy*)

The main objective of the book is to provide an introduction to fluid dynamics in a simultaneously rigorous and accessible way, and its approach follows the idea that both the generation mechanisms and the main features of the fluid dynamic loads can be satisfactorily understood only after the equations of fluid motion and all their physical and mathematical implications have been thoroughly assimilated.

Readership: Graduates and undergraduates in the fields of fluid mechanics and engineering, specifically aerospace, mechanical and civil engineering.

580pp	Apr 2012	
978-1-84816-888-6	US\$138	£91
978-1-84816-889-3(pbk)	US\$68	£45



FINITE ELEMENT METHODS FOR ENGINEERS (2nd Edition)

by **Roger T Fenner** (*Imperial College London, UK*)

Chapters of the book deal with structural problems (beams), classification of a broad range of engineering into harmonic and biharmonic types, finite element analysis of harmonic problems, finite element analysis of biharmonic problems (plane stress and plane strain). Full FORTRAN programs are listed and explained in detail, and a range of practical problems solved in the text. Despite being somewhat unfashionable for general programming purposes, the FORTRAN language remains very widely used in engineering. The programs listed, which were originally developed for use on mainframe computers, have been thoroughly updated for use on desktops and laptops. Unlike the first edition, the new edition has Problems (with Solutions) at the end of each chapter.

Readership: Students, graduate students, and academics in mechanical engineering, civil engineering and aeronautical engineering.

200pp	Mar 2012	
978-1-84816-886-2	US\$48	£32

FRACTURE MECHANICS OF ELECTROMAGNETIC MATERIALS: Nonlinear Field Theory and Applications

by **Xiaohong Chen** (*Goodrich Aerostructures, USA*) & **Yiu-Wing Mai** (*University of Sydney, Australia*)

Fracture Mechanics of Electromagnetic Materials provides a comprehensive overview of fracture mechanics of conservative and dissipative materials, as well as a general formulation of nonlinear field theory of fracture mechanics and a rigorous treatment of dynamic crack problems involving coupled magnetic, electric, thermal and mechanical field quantities.

Readership: Graduate students, academic researchers and engineering specialists in fracture mechanics.

300pp	May 2012	
978-1-84816-663-9	US\$88	£55
978-1-84816-664-6(ebook)	US\$114	

COASTAL MANAGEMENT IN THE FACE OF CLIMATE CHANGE

by **Dominic Reeve** (*University of Plymouth, UK*)

The following chapters comprehensively cover practical aspects of beach monitoring, estimating the nearshore wave conditions, quantifying the littoral drift environment, predicting changes in beach configuration, integrating the various components into a coherent management framework. Several examples of applications of the methods are given to illustrate the advantages and limitations of the different techniques, together with a case study from the south coast of the UK.

Readership: Graduate students, practitioners, and researchers in coastal engineering, civil engineering, environmental management and planning and environmental engineering.

200pp	Jun 2012	
978-1-84816-583-0	US\$88	£61
978-1-84816-584-7(ebook)	US\$114	

STRUCTURAL INTEGRITY CONSIDERATIONS IN ENGINEERING DESIGN: Introduction to Structural Integrity and Basic Fatigue Design (Volume I)

by **David W Hoepfner** (*University of Utah, USA*)

Volume 1 introduces the concepts of structural integrity and the basics of fatigue design, including the development of safe life fatigue design concepts based on traditional continuum mechanics. An extensive discussion of discontinuities is presented to illustrate their importance to all deformation mechanisms and especially the mechanisms of fatigue.

Readership: Upper-class undergraduate and graduate students, academics, and industry professionals in the field of structural integrity, and general management of reliability and quality.

500pp	Apr 2012	
978-1-86094-950-0	US\$111	£76
978-1-86094-951-7(ebook)	US\$144	

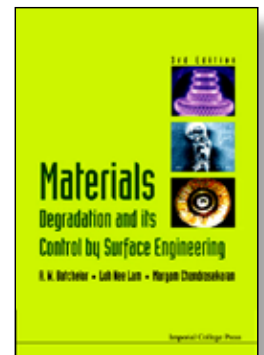
MATERIALS DEGRADATION AND ITS CONTROL BY SURFACE ENGINEERING (3rd Edition)

by **Andrew W Batchelor** (*previously Monash University, Malaysia*), **Nee Lam Loh** (*Nanyang Technological University, Singapore*) & **Margam Chandrasekaran** (*Bio-Scaffold International Pte Ltd, Singapore*)

This book provides a general holistic view of materials degradation without undue emphasis on aqueous corrosion with the neglect of other important topics such as liquid metal corrosion. The control or management of materials degradation is not only discussed in scientific terms, but the economics or financial aspects of materials degradation and surface engineering is also discussed in detail with the help of analytical models.

Readership: Engineers and scientists in materials engineering, surface science, materials science (general), materials chemistry and surface and interface chemistry.

420pp	Mar 2011	
978-1-84816-501-4	US\$138	£91
978-1-84816-502-1(ebook)	US\$179	



For more information, visit: www.worldscibooks.com

Series on Coastal and Ocean Engineering Practice - Vol. 1

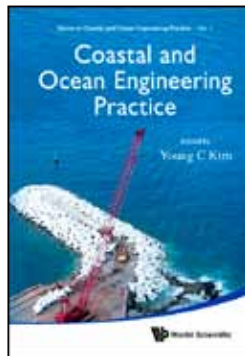
COASTAL AND OCEAN ENGINEERING PRACTICE

edited by **Young C Kim** (*California State University, Los Angeles, USA*)

This book focuses on the latest technology applied in design and construction, effective engineering methodology, unique projects and problems, design and construction challenges, and other lessons learned. In addition, unique practices in planning, design, construction, maintenance, and performance of coastal and ocean projects will be explored.

Readership: Graduates and researchers in coastal, ocean, civil and geotechnical engineering.

400pp	Oct 2011	
978-981-4360-56-2	US\$128	£84
978-981-4360-57-9(ebook)	US\$166	



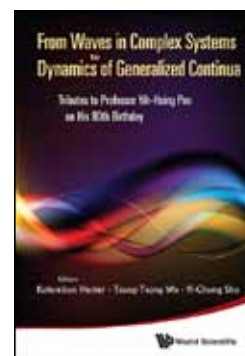
FROM WAVES IN COMPLEX SYSTEMS TO DYNAMICS OF GENERALIZED CONTINUA: Tributes to Prof. Yih-Hsing Pao on His 80th Birthday

edited by **Kolumban Hutter** (*Federal Institute of Technology, Zurich, Switzerland*), **Tsung-Tsong Wu** & **Yi-Chung Shu** (*National Taiwan University, Taiwan*)

The book reviews recent research activities in applied mechanics and applied mathematics such as the fields of solid & fluid constitutive modeling for coupled fields, applications of geophysical & environmental context in judicious numerical-computational implementations. The book aims to merge foundation aspects of continuum mechanics with modern technological applications, notably on reviewing recent advances in the treated subjects in an attractive presentation accessible to a wide readership of engineering and applied sciences.

Readership: Researchers, professionals, and graduate students in applied mechanics, and mathematics, energy studies, solid & fluid mechanics, and complex systems.

436pp	Jun 2011	
978-981-4340-71-7	US\$139	£92
978-981-4340-72-4(ebook)	US\$181	



Series on Quality, Reliability and Engineering Statistics - Vol. 15

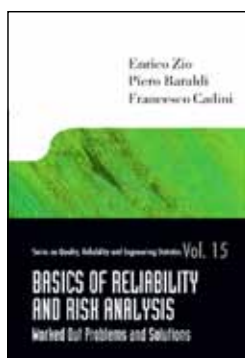
BASICS OF RELIABILITY AND RISK ANALYSIS: Worked Out Problems and Solutions

by **Enrico Zio** (*École Centrale Paris et Supelec, France & Politecnico di Milano, Italy*), **Piero Baraldi** & **Francesco Cadini** (*Politecnico di Milano, Italy*)

This exercise book serves as a complementary tool supporting the methodology concepts introduced in the books "An introduction to the basics of reliability and risk analysis" and "Computational methods for reliability and risk analysis" by Enrico Zio, in that it gives an opportunity to familiarize with the applications of classical and advanced techniques of reliability and risk analysis. This book is also available as a set with *Computational Methods for Reliability and Risk Analysis* and *An Introduction to the Basics of Reliability and Risk Analysis*.

Readership: Graduate students and researchers in the field of reliability and risk analysis.

220pp	Apr 2011	
978-981-4355-03-2	US\$68	£44
Set		
978-981-4360-68-5	US\$225	£148



Advanced Series on Ocean Engineering

DYNAMICS OF FLOATING OFFSHORE STRUCTURES

by **Subrata K Chakrabarti** (*Offshore Structure Analysis, Inc., USA*)

This book will provide a complete coverage on the dynamics of floating offshore structures. Topics like random waves, wind and current, etc. will be developed from the fundamental principles and their applications to offshore structures will be discussed. The design aspect of the offshore structure, both for short-term and long-term response and structural fatigue, are important elements of the dynamic response and will be further elaborated upon in the text.

Readership: Senior undergraduate, graduates and researchers in offshore and ocean engineering.

600pp	Mar 2013	
978-981-4280-55-6	US\$95	£63
978-981-4280-56-3(pbk)	US\$55	£36

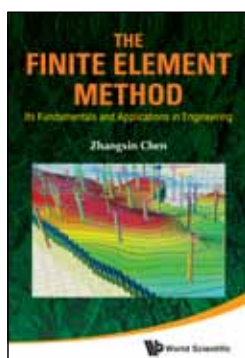
THE FINITE ELEMENT METHOD: Its Fundamentals and Applications in Engineering

by **Zhangxin Chen** (*University of Calgary, Canada*)

This Finite Element Method offers a fundamental and practical introduction to the finite element method, its variants, and their applications in engineering. Every concept is introduced in the simplest possible setting, while maintaining a level of treatment that is as rigorous as possible without being unnecessarily abstract. Various finite elements in one, two, and three space dimensions are introduced, and their applications to elliptic, parabolic, hyperbolic, and nonlinear equations and to solid mechanics, fluid mechanics, and porous media flow problems are addressed.

Readership: Upper-level undergraduates and beginning graduate students, researchers and industrialists dealing with finite element methods, numerical methods and finite element applications.

348pp	Oct 2011	
978-981-4350-56-3	US\$90	£59
978-981-4350-57-0(pbk)	US\$40	£26



Series on Quality, Reliability and Engineering Statistics

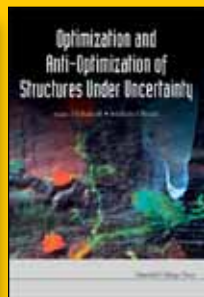
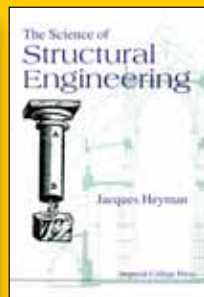
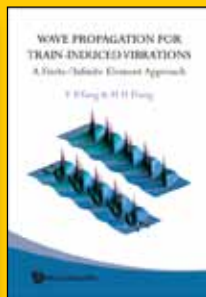
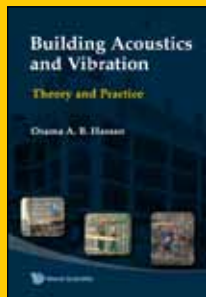
DESIGN FOR SIX SIGMA FOR ENGINEERS

by **Matthew Hu**, **Kai Yang** (*Wayne State University, USA*), **Michael Sheh** & **Malik Kayupov** (*Engineous Software Inc., USA*)

Design for Six Sigma (DFSS) has dramatically impacted product quality and performance and increased profit. In this comprehensive volume, the four-phase IDOV — Identify-Design-Optimize-Verify — DFSS methodology is discussed in detail. The various practices from inventive design methodologies, deterministic and stochastic numerical methods, and the use of CAE simulation techniques, are mapped to the DFSS procedure. Many case studies are used to illustrate how tools are used in DFSS processes.

Readership: Graduate students, engineers and industrialists interested in the Design for Six Sigma methodology.

500pp	Apr 2012	
978-981-256-063-6	US\$115	£76
978-981-283-335-8(ebook)	US\$150	



Bestselling Backlist

BUILDING ACOUSTICS AND VIBRATION: Theory and Practice

by **Osama A B Hassan** (Umeå University, Sweden)

As a comprehensive reference dedicated to sound and vibration in buildings, *Building Acoustics and Vibration* addresses the basic and advanced principles that can be used to solve practical and theoretical problems typically encountered in building and architectural acoustic practices. In addition, physical and mathematical concepts are introduced and developed sufficiently to make this publication a self-contained and up-to-date source of information for readers.

Readership: Civil engineers, consultants in sound and vibration, building engineers, and graduate and post-graduate students in civil engineering.

972pp Jun 2009
978-981-283-833-9 US\$133 £88

WAVE PROPAGATION FOR TRAIN-INDUCED VIBRATIONS: A Finite/Infinite Element Approach

by **Y B Yang** (National Taiwan University, Taiwan) & **H H Hung** (National Center for Research on Earthquake Engineering, Taiwan)

For buildings and factories located near railway or subway lines, the vibrations caused by the moving trains, especially at high speeds, may be annoying to the residents or detrimental to the high-precision production lines. However, there is a lack of simple and efficient tools for dealing with the kind of environmental vibrations, concerning simulation of the radiation of infinite boundaries; irregularities in soils, buildings and wave barriers; and dynamic properties of the moving vehicles. This book is intended to fill such a gap.

Readership: Senior undergraduate and graduate students, researchers and engineers in civil and structural engineering.

492pp Jun 2009
978-981-283-582-6 US\$142 £94
978-981-283-583-3(ebook) US\$185

Engineering Materials for Technological Needs - Vol. 1
HIGH-PERFORMANCE CONSTRUCTION MATERIALS: Science and Applications

edited by **Caijun Shi** (Hunan University, China) & **Y L Mo** (University of Houston, USA)

This book describes a number of high-performance construction materials, including concrete, steel, fiber-reinforced cement, fiber-reinforced plastics, polymeric materials, geosynthetics, masonry materials and coatings. It discusses the scientific bases for the manufacture and use of these high-performance materials. Testing and application examples are also included, in particular the application of relatively new high-performance construction materials to design practice.

Readership: Civil engineers, material scientists and engineers, technologists, academics and graduates majoring in civil engineering.

448pp Jun 2008
978-981-279-735-3 US\$140 £92
978-981-279-736-0(ebook) US\$182

COMPRESSIBILITY OF ULTRA-SOFT SOIL

by **Myint Win Bo** (DST Consulting Engineers Inc., Canada)

This book describes the compression behavior of ultra-soft soil upon additional load application. Various types of laboratory compression tests suitable for this type of soil are discussed, such as tests using small- and large-scale consolidometers, hydraulic Rowe cells under different drainage conditions, constant rate of loading and constant rate of strain tests. It also explains how to determine the transition point, which differentiates the two distinct behaviors between slurry state and soil state deformation.

Readership: Graduate students, academics, researchers, engineers, and contractors in civil engineering, coastal engineering and geotechnical engineering.

332pp Apr 2008
978-981-277-188-9 US\$110 £72

THE SCIENCE OF STRUCTURAL ENGINEERING

by **Jacques Heyman** (University of Cambridge)

Structural engineering has taken a completely different path since the middle of the twentieth century; plastic analysis reverts to Galileo's objective of the calculation of ultimate strength, and powerful new theorems now underpin the activities of the structural engineer. This book deals with a technical subject, but the presentation is completely non-mathematical.

Readership: Undergraduates in civil engineering, civil, structural and mechanical engineers; architects.

120pp Nov 1999
978-1-86094-189-4(pbk) US\$46 £31

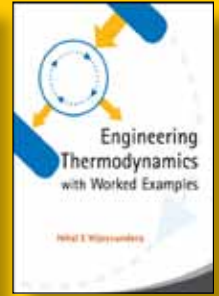
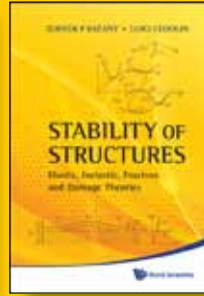
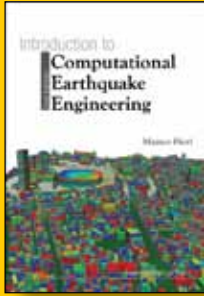
OPTIMIZATION AND ANTI-OPTIMIZATION OF STRUCTURES UNDER UNCERTAINTY

by **Isaac Elishakoff** (Florida Atlantic University, USA) & **Makoto Ohsaki** (Kyoto University, Japan)

This is currently the only book that covers the combination of optimization and anti-optimization. It shows how various optimization techniques are used in the novel anti-optimization technique, and how the structural optimization can be exponentially enhanced by incorporating the concept of worst-case scenario, thereby increasing the safety of the structures designed in various fields of engineering.

Readership: Graduate students, professionals and academics in the field of mechanical engineering.

424pp Mar 2010
978-1-84816-477-2 US\$127 £84
978-1-84816-478-9(ebook) US\$165



Bestselling Backlist

INTRODUCTION TO COMPUTATIONAL EARTHQUAKE ENGINEERING (2nd Edition)

by Muneo Hori (*University of Tokyo, Japan*)

Introduction to Computational Earthquake Engineering covers solid continuum mechanics, finite element method and stochastic modeling comprehensively, with the second and third chapters explaining the numerical simulation of strong ground motion and faulting, respectively. Stochastic modeling is used for uncertain underground structures, and advanced analytical methods for linear and non-linear stochastic models are presented.

Readership: Academic and industry: engineers, students; advanced undergraduates in the field of earthquake engineering.

350pp	Aug 2010	
978-1-84816-397-3	US\$111	£76
978-1-84816-398-0(pbk)	US\$73	£51
978-1-84816-399-7(ebook)	US\$144	

DESIGN OF PILE FOUNDATIONS IN LIQUEFIABLE SOILS

by Gopal Madabhushi (*University of Cambridge, UK*), Jonathan Knappett (*University of Dundee, UK*) & Stuart Haigh (*University of Cambridge, UK*)

The book provides designers and practicing civil engineers with a sound knowledge of pile behaviour in liquefiable soils and easy-to-use methods to design pile foundations in seismic regions. For graduate students and researchers, it brings together the latest research findings on pile foundations in a way that is relevant to geotechnical practice.

Readership: Researchers, academics, designers and graduate students in earthquake engineering, civil engineering and ocean/coastal engineering.

232pp	Sep 2009	
978-1-84816-362-1	US\$92	£60
978-1-84816-363-8(ebook)	US\$120	

Computational and Experimental Methods in Structures - Vol. 3

MULTISCALE MODELING IN SOLID MECHANICS: Computational Approaches

edited by Ugo Galvanetto & M H Ferri Aliabadi (*Imperial College London, UK*)

The book begins with a detailed introduction to the theories on which different multiscale approaches are based, with regards to linear Homogenisation as well as various nonlinear approaches. It then presents advanced applications of multiscale approaches applied to nonlinear mechanical problems. Finally, the novel topic of materials with self-similar structure is discussed.

Readership: Researchers and academics in the field of heterogeneous materials and mechanical engineering; professionals in aeronautical engineering and materials science.

352pp	Sep 2009	
978-1-84816-307-2	US\$163	£107
978-1-84816-308-9(ebook)	US\$212	

STABILITY OF STRUCTURES: Elastic, Inelastic, Fracture and Damage Theories

by Zdeněk P Bažant (*Northwestern University, USA*) & Luigi Cedolin (*Politecnico di Milano, Italy*)

A crucial element of structural and continuum mechanics, stability theory has limitless applications in civil, mechanical, aerospace, naval and nuclear engineering. This text of unparalleled scope presents a comprehensive exposition of the principles and applications of stability analysis. It has been proven as a text for introductory courses and various advanced courses for graduate students. It is also prized as an exhaustive reference for engineers and researchers.

Readership: Advanced undergraduates and graduate students, academia and researchers in structural stability.

1040pp	Aug 2010	
978-981-4317-02-3	US\$150	£93
978-981-4317-03-0(pbk)	US\$55	£34
978-981-4317-04-7(ebook)	US\$195	

Computational and Experimental Methods in Structures - Vol. 1

BUCKLING AND POSTBUCKLING STRUCTURES: Experimental, Analytical and Numerical Studies

edited by B G Falzon & M H Aliabadi (*Imperial College London, UK*)

This book provides an in-depth treatment of the study of the stability of engineering structures. Contributions from internationally recognized leaders in the field ensure a wide coverage of engineering disciplines in which structural stability is of importance, in particular the analytical and numerical modelling of structural stability applied to aeronautical, civil, marine and offshore structures.

Readership: Graduate students, engineers, and researchers in aerospace engineering, civil engineering, and numerical and computational mathematics.

528pp	May 2008	
978-1-86094-794-0	US\$183	£121
978-1-84816-230-3(ebook)	US\$238	

ENGINEERING THERMODYNAMICS WITH WORKED EXAMPLES

by Nihal E Wijeyesundera (*National University of Singapore*)

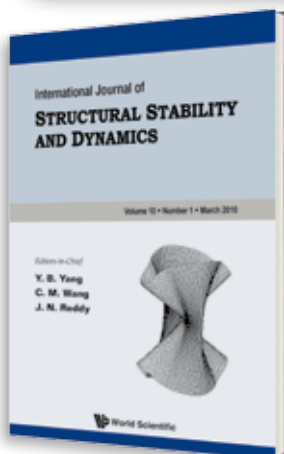
The book includes all the subject matter covered in a typical undergraduate course in engineering thermodynamics. It includes a series of worked examples in each chapter, carefully chosen to expose students to diverse applications of engineering thermodynamics. Each worked example is designed to be representative of a class of physical problems. At the end of each chapter, there are an additional 10 to 15 problems for which numerical answers are provided.

Supplementary materials are available upon request for all instructors who adopt this book as a course text. Please send your request to sales@wspc.com.

Readership: Undergraduate and graduate students in mechanical engineering, chemical engineering, civil engineering, electrical & electronic engineering, bioengineering, applied physics and thermodynamics.

724pp	Nov 2010	
978-981-4293-13-6	US\$148	£98
978-981-4293-14-3(pbk)	US\$78	£51

Journals



International Journal of Structural Stability and Dynamics (IJSSD)

<http://www.worldscinet.com/ijssd/>

 **IJSSD will increase from 6 to 8 issues in 2013**

About IJSSD: Aims & Scope

The aim of this journal is to provide a unique forum for the publication and rapid dissemination of original research on stability and dynamics of structures. Papers that deal with conventional land-based structures, aerospace structures, marine structures, as well as biostructures and micro- and nano-structures are considered. Papers devoted to all aspects of structural stability and dynamics (both transient and vibration response), ranging from mathematical formulations, novel methods of solutions, to experimental investigations and practical applications in civil, mechanical, aerospace, marine, bio- and nano-engineering will be published.

Abstracting/Indexing

- Mathematical Reviews
- CSA Health and Safety Abstracts
- Science Citation Index Expanded
- Current Contents®/Engineering, Computing, and Technology
- ISI Alerting Services
- Compendex

Editors-In-Chief

- Y B Yang**
National Taiwan University
- C M Wang**
National University of Singapore
- J N Reddy**
Texas A&M University

Journal of Multiscale Modelling (JMM)

<http://www.worldscinet.com/jmm/>

About JMM: Aims & Scope

JMM is an international peer-reviewed journal that presents forefront fundamental works in the above field of research. It features timely scientific reports of advances in modelling and computation, theoretical breakthroughs and also contains interesting review articles about emerging issues. It also provides a common platform for exchange of views and presentation of original papers (theoretical, computational and experimental) with a general emphasis on Multiscale issues in this rapidly developing field. Papers reporting advancement of the theory and applications of single scale problems (i.e. Nano, Micro, etc.) which pave the way for multiscale implementation are also appropriate for the journal.

Editor-in-Chief

M H Aliabadi
Imperial College London

Abstracting/Indexing

- Chemical Abstracts Service
- Compendex
- INSPEC
- Scopus

Online Gateways

- CEPIEC
- CNPIEC
- CrossRef
- EBSCOhost Electronic Journals Service
- Google Scholar
- J-Gate
- OCLC FirstSearch
- SwetsWise

Journal of Computational Acoustics (JCA)

<http://www.worldscinet.com/jca/>

About JCA: Aims & Scope

The aim of this journal is to provide an international forum for the dissemination of the state-of-the-art information in the field of Computational Acoustics.

Topics covered by this journal include research and tutorial contributions in OCEAN ACOUSTICS (a subject of active research in relation with sonar detection and the design of noiseless ships), SEISMO-ACOUSTICS (of concern to earthquake science and engineering, and also to those doing underground prospecting like searching for petroleum), AEROACOUSTICS (which includes the analysis of noise created by aircraft), COMPUTATIONAL METHODS, and SUPERCOMPUTING. In addition to the traditional issues and problems in computational methods, the journal also considers theoretical research acoustics papers which lead to large-scale scientific computations.

Abstracting/Indexing

- CompuMath Citation Index®
- CSA Aquatic Sciences and Fisheries Abstracts (ASFA)
- CSA Meteorological & Geostrophysical Abstracts
- CSA Oceanic Abstracts
- CSA Selected Water Resources Abstracts
- Current Contents®/Engineering, Computing, and Technology
- INSPEC
- ISI Alerting Services
- Mathematical Reviews
- Science Citation Index®
- Science Citation Index Expanded (also known as SciSearch®)
- Scopus
- Zentralblatt MATH

Online Gateways

- CEPIEC
- CNPIEC
- CrossRef
- EBSCO Publishing
- EBSCOhost Electronic Journals Service
- Google Scholar
- J-Gate
- OCLC FirstSearch
- WorldSciNet - Mirror Site in China
- SwetsWise

For orders or enquiries, please contact any of our offices below or visit us at: www.worldscientific.com

• NORTH & SOUTH AMERICA	World Scientific Publishing Co. Inc. 27 Warren Street, Suite 401-402, Hackensack, NJ 07601, USA Toll-free fax: 1 888 977 2665 Toll-free: 1 800 227 7562 Email: sales@wspc.com
• EUROPE & THE MIDDLE EAST	World Scientific Publishing (UK) Ltd. c/o Marston Book Services, P O Box 269, Abingdon, Oxon OX14 4YN, UK Fax: 44 (0) 123 546 5555 Tel: 44 (0) 123 546 5500 Email: direct.orders@marston.co.uk
• ASIA & THE REST OF THE WORLD	World Scientific Publishing Co. Pte. Ltd. Farrer Road, P O Box 128, SINGAPORE 912805 Fax: 65 6467 7667 Tel: 65 6466 5775 Email: sales@wspc.com.sg

* Prices subject to change without prior notice