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Deep Foundations on Bored and Auger Piles - BAP III - W. Haegeman 2020-09-29

This text presents findings from the 3rd International Geotechnical Seminar, held in Ghent, Belgium. Topics include: American experiences with large diameter bored piles; case histories; static, dynamic and pile integrity testing; and installation parameters and capacity of screwed piles.

Issues in Land and Water Engineering: 2011 Edition - 2012-01-09

Issues in Land and Water Engineering / 2011 Edition is a ScholarlyEditions™ eBook that delivers timely, authoritative, and comprehensive information about Land and Water Engineering. The editors have built Issues in Land and Water Engineering: 2011 Edition on the vast information databases of ScholarlyNews.™ You can expect the information about Land and Water Engineering in this eBook to be deeper than what you can access anywhere else, as well as consistently reliable, authoritative, informed, and relevant. The content of Issues in Land and Water Engineering: 2011 Edition has been produced by the world's leading scientists, engineers, analysts, research institutions, and companies. All of the content is from peer-reviewed sources, and all of it is written, assembled, and edited by the editors at ScholarlyEditions™ and available exclusively from us. You now have a source you can cite with authority, confidence, and credibility. More information is available at <http://www.ScholarlyEditions.com/>.

Inventory of Water Resources Research in Australia - 1976

Wastewater Reuse and Management - Sanjay K. Sharma 2012-11-06

Over the past 50 years the volume of wastewater has grown exponentially as a result of the increasing world population and the expansion of industrial developments. Researchers all over the world have been trying to address this issue suitably in order to fight water scarcity; yet, it is only recently that wastewater recycling has caught their attention as an effective and responsible solution. Wastewater is a resource that can be adequately treated to successfully satisfy most water demands as well as decreasing wastewater discharges and preventing pollution. This book presents the studies of some of the most prestigious international scientists and gathers them in three different sections: Wastewater Management and Reuse, Wastewater Treatment options and Risk Assessment. The result is an insightful analysis of waste water management, its treatments, and the processes that have been studied, optimized and developed so far to sustain our environment. Wastewater Reuse and Management represents a valuable resource to academic researchers, students, institutions, environmentalists, and anyone interested in environmental policies aimed at safeguarding both the quality and the quantity of water.

Slope Stability Engineering - Institution of Civil Engineers (Great Britain) 1991

This volume draws on the experience and extensive research of an international authorship to bring together details on slope stability, causes of landslides, landslide prevention, new techniques for assessing and predicting stability, new methods for stabilising slopes and the special considerations for coastal situations.

Maintenance, Safety, Risk, Management and Life-Cycle Performance of Bridges - Nigel Powers 2018-07-04
Maintenance, Safety, Risk, Management and Life-Cycle Performance of Bridges contains lectures and papers presented at the Ninth International Conference on Bridge Maintenance, Safety and Management

(IABMAS 2018), held in Melbourne, Australia, 9-13 July 2018. This volume consists of a book of extended abstracts and a USB card containing the full papers of 393 contributions presented at IABMAS 2018, including the T.Y. Lin Lecture, 10 Keynote Lectures, and 382 technical papers from 40 countries. The contributions presented at IABMAS 2018 deal with the state of the art as well as emerging concepts and innovative applications related to the main aspects of bridge maintenance, safety, risk, management and life-cycle performance. Major topics include: new design methods, bridge codes, heavy vehicle and load models, bridge management systems, prediction of future traffic models, service life prediction, residual service life, sustainability and life-cycle assessments, maintenance strategies, bridge diagnostics, health monitoring, non-destructive testing, field testing, safety and serviceability, assessment and evaluation, damage identification, deterioration modelling, repair and retrofitting strategies, bridge reliability, fatigue and corrosion, extreme loads, advanced experimental simulations, and advanced computer simulations, among others. This volume provides both an up-to-date overview of the field of bridge engineering and significant contributions to the process of more rational decision-making on bridge maintenance, safety, risk, management and life-cycle performance of bridges for the purpose of enhancing the welfare of society. The Editors hope that these Proceedings will serve as a valuable reference to all concerned with bridge structure and infrastructure systems, including students, researchers and engineers from all areas of bridge engineering.

The Geotechnics of Hard Soils--soft Rocks - Aldo Evangelista 1998

The Rise of Smart Cities - Amir Alavi 2022-04-12

The Rise of Smart Cities: Advanced Structural Sensing and Monitoring Systems provides engineers and researchers with a guide to the latest breakthroughs in the deployment of smart sensing and monitoring technologies. The book introduces readers to the latest innovations in the area of smart infrastructure-enabling technologies and how they can be integrated into the planning and design of smart cities. With this book in hand, readers will find a valuable reference in terms of civil infrastructure health monitoring, advanced sensor network architectures, smart sensing materials, multifunctional material and structures, crowdsourced/social sensing, remote sensing and aerial sensing, and advanced computation in sensor networks. Reviews the latest development in smart structural health monitoring (SHM) systems Introduces all major algorithms, with a focus on practical implementation Includes real-world applications and case studies Opens up a new horizon for robust structural sensing methods and their applications in smart cities
Handbook of Sustainable Concrete and Industrial Waste Management - Francesco Colangelo 2021-12-13
The Handbook of Sustainable Concrete and Industrial Waste Management summarizes key research trends in recycling and reusing concrete and industrial waste to reduce their environmental impact. This volume also includes important contributions in collaboration with the CRI-TEST Innovation Lab, Naples – Acerra. Part one discusses eco-friendly innovative cement and concrete and reviews key substitute materials. Part two analyzes the use of industrial waste as aggregates and the mechanical properties of concrete containing waste materials. Part three discusses differences between innovative binders, focusing on alkali-activated and geopolymer concrete. Part four provides a thorough overview of the life cycle assessment (LCA) of concrete containing industrial wastes and the impacts related to the logistics of wastes, the production of the concrete, and the management of industrial wastes. By providing research examples, case

studies, and practical strategies, this book is a state-of-the-art reference for researchers working in construction materials, civil or structural engineering, and engineers working in the industry. Offers a systematic and comprehensive source of information on the latest developments in sustainable concrete; Analyzes different types of sustainable concrete and innovative binders from chemical, physical, and mechanical points of view; Includes real case studies showing application of the LCA methodology.

Ground Anchorages and Anchored Structures - Institution of Civil Engineers (Great Britain) 1997

This volume presents the proceedings of the first major international conference for over twenty years on the state-of-the-art of ground anchorage technology. Leading researchers and practitioners from around the world came together to discuss all the aspects of design, construction and performance of ground anchorages for the use in stabilisation of structures, excavations and slopes. Practical issues relating to construction and installation of anchorages are considered in a series of examples of engineering projects from around the world. Reviews of new national and international standards of construction are also presented along with current practice in different countries.

Australian national bibliography - 1962

Proceedings of University Seminar on Pollution and Water Resources - Columbia University. University Seminar on Pollution and Water Resources 1971

Global Flood Hazard - Guy J-P. Schumann 2018-07-18

Global Flood Hazard Subject Category Winner, PROSE Awards 2019, Earth Science Selected from more than 500 entries, demonstrating exceptional scholarship and making a significant contribution to the field of study. PROSE Award Finalist 2019 Association of American Publishers Award for Professional and Scholarly Excellence Flooding is a costly natural disaster in terms of damage to land, property and infrastructure. This volume describes the latest tools and technologies for modeling, mapping, and predicting large-scale flood risk. It also presents readers with a range of remote sensing data sets successfully used for predicting and mapping floods at different scales. These resources can enable policymakers, public planners, and developers to plan for, and respond to, flooding with greater accuracy and effectiveness. Describes the latest large-scale modeling approaches, including hydrological models, 2-D flood inundation models, and global flood forecasting models Showcases new tools and technologies such as Aqeduct, a new web-based tool used for global assessment and projection of future flood risk under climate change scenarios Features case studies describing best-practice uses of modeling techniques, tools, and technologies Global Flood Hazard is an indispensable resource for researchers, consultants, practitioners, and policy makers dealing with flood risk, flood disaster response, flood management, and flood mitigation.

Deep Rock Mechanics: From Research to Engineering - Heping Xie 2018-12-19

At present, deep earth resources remain poorly understood and entirely under-utilised. There is a growing appreciation of the important role deep earth will play in future sustainability, particularly in opportunities for new and sustainable large-scale energy alternatives, and extraction of resources through mining and greenhouse mitigation. Deep Rock Mechanics: From Research to Engineering is a collection of papers on the effective development of deep earth resources, which were presented at the International Conference on Geo-mechanics, Geo-Energy and Geo-Resources 2018 (Chengdu, P.R. China, 22-24 September 2018). The contributions aim at breaking beyond existing patterns of discovery, to advance research on geomechanical and geophysical processes in deep earth resources and energy development, enhancing deep earth energy and mineral extraction and mitigating harmful atmospheric emissions. Deep Rock Mechanics: From Research to Engineering covers a wide range of topics: 1. Deep rock mechanics and mining theory 2. Water resources development and protection 3. Unconventional oil and gas extractions 4. CO2 sequestrations technologies and nuclear waste disposal 5. Geothermal energy 6. Mining engineering 7. Petroleum engineering 8. Geo-environmental engineering 9. Civil geotechnical engineering Deep Rock Mechanics: From Research to Engineering promotes safer and greener ways for energy and resource production at great depth, and will serve as a must-have reference for academics and professionals involved or interested in geo-mechanics, geo-energy, and geo-resources.

8th RILEM International Conference on Mechanisms of Cracking and Debonding in Pavements -

Armelle Chabot 2016-05-25

This book presents the latest advances in research to analyze mechanical damage and its detection in multilayer systems. The contents are linked to the Rilem TC241 - MCD scientific activities and the proceedings of the 8th RILEM International Conference on Mechanisms of Cracking and Debonding in Pavements (MCD2016). MCD2016 was hosted by Ifsttar and took place in Nantes, France, on June 7-9, 2016. In their lifetime, pavements undergo degradation due to different mechanisms of which cracking is among the most important ones. The damage and the fracture behavior of all its material layers as well as interfaces must be understood. In that field, the research activities aims to develop a deeper fundamental understanding of the mechanisms responsible for cracking and debonding in asphalt concrete and composite (e.g. asphalt overlays placed on PCC or thin cement concrete overlay placed on asphalt layer) pavement systems.

Sustainability of Construction Materials - Jamal Khatib 2009-04-29

Until recently, much of the development of building materials has predominantly focused on producing cheaper, stronger and more durable construction materials. More recently attention has been given to the environmental issues in manufacturing, using, disposing and recycling of construction materials. Sustainability of construction materials brings together a wealth of recent research on the subject. The first part of the book gives a comprehensive and detailed analysis of the sustainability of the following building materials: aggregates; timber, wood and bamboo; vegetable fibres; masonry; cement, concrete and cement replacement materials; metals and alloys; glass; and engineered wood products. A final group of chapters cover the use of waste tyre rubber in civil engineering works, the durability of sustainable construction materials and nanotechnologies for sustainable construction. With its distinguished editor and international team of contributors, Sustainability of construction materials is a standard reference for anyone involved in the construction and civil engineering industries with an interest in the highly important topic of sustainability. Provides a comprehensive and detailed analysis of the sustainability of a variety of construction materials ranging from wood and bamboo to cement and concrete Assesses the durability of sustainable construction materials including the utilisation of waste tyre rubber and vegetable fibres Collates a wealth of recent research including relevant case studies as well as an investigation into future trends

Trends on Construction in the Digital Era - António Gomes Correia 2022-11-19

These proceedings address the latest developments in the broad area of intelligent construction integrated in the mission of the International Society for Intelligent Construction (ISIC) which aims to promote intelligent construction technologies applications from the survey, design, construction, operation, and maintenance/rehabilitation by adapting to changes of environments and minimizing risks. Its goals are to improve the quality of construction, cost-saving, and safety, exploring fundamental issues related to the application and use of Artificial Intelligence (AI) and Machine Learning techniques and technology. ISIC 2022 is the 3rd ISIC international conference, held in Guimarães, Portugal on September 6-9, 2022, and follows the previous successful instalments of the conference series in China (2019) and USA (2017). It took a holistic approach to integrate civil engineering, construction machinery, electronic sensor technology, survey/testing technologies, information technology/computing, and other related fields in the broad area of intelligent construction. The respective contributions cover the following topics: Artificial Intelligence for Design and the Built Environment, Building Information Modelling (BIM) and Construction Automation and Robotics, Intelligent Construction, Sustainable Construction, and Sustainable and Smart Infrastructures. Given its broad range of coverage, the book will benefit students, educators, researchers and professionals practitioners alike, encouraging these readers to help the intelligent construction community into the digital era and with a vision on societal issues.

AI 2006: Advances in Artificial Intelligence - Abdul Sattar 2006-11-18

This book constitutes the refereed proceedings of the 19th Australian Joint Conference on Artificial Intelligence, AI 2006, held in Hobart, Australia, December 2006. Coverage includes foundations and knowledge based system, machine learning, connectionist AI, data mining, intelligent agents, cognition and user interface, vision and image processing, natural language processing and Web intelligence, neural

networks, robotics, and AI applications.

Traffic Engineering and Management, 7th Edition - Alexa Delbosc 2017-11

A comprehensive overview of traffic engineering and management practice. It provides guidance in the planning, design and operation of traffic systems in a single text, letting the reader gain a broad background understanding of the subject quickly and easily.

Structural Health Monitoring - N. Rajic 2021-04-15

The book presents recent advances regarding the inspection and monitoring of engineering structures; including bridges, buildings, aircraft and space structures, nuclear reactors and defense platforms. Among the techniques covered are UAV photogrammetry, strain monitoring, infrared detection, acoustic emission testing, residual stress measurements, fiber optical sensing, thermographic inspection, vibration analysis, piezoelectric sensing and ultrasonic testing. Keywords: Bridges, Buildings, Aircraft Structures, Space Structures, Nuclear Reactors, Defense Platforms, UAV Photogrammetry, Strain Monitoring, Infrared Detection, Acoustic Emission Testing, Residual Stress Measurements, Fiber Optical Sensing, Thermographic Inspection, Vibration Analysis, Piezoelectric Sensing, Ultrasonic Testing, Impact Damage, Anaerobic Reactor Performance, Geomembranes, Ossointegrated Implants, Fatigue Crack Growth, Accelerometer, Nonlinear Cable Bracing, Timber Utility Poles, Steel Pipes, Loosened Bolts on Pipes, IMU-based Motion Capture, CFRP Composites, Maglev Guideway Girder, Cable-Pylon Anchorage, Deep Learning Techniques.

Earth Observation for Flood Applications - Guy J-P. Schumann 2021-05-21

Earth Observation for Flood Applications: Progress and Perspectives describes the latest scientific advances in Earth Observation. With recent floods around the world becoming ever more devastating, there is a need for better science enabling more effective solutions at a fast pace. This book aims at stretching from the current flood mapping to diverse real data so as to estimate the flood risk and damage. Earth Observation for Flood Applications: Progress and Perspectives includes three parts containing each a separate but complementary topic area under floods. Each chapter unfolds various applications, case studies, and illustrative graphics. In terms of flood mapping and monitoring, the usage of multi-sensor satellite data, web-services information, microwave remote sensing methods are discussed in depth. So, this book is a valuable resource for scientists, researchers, and students in the area of earth observation. Focuses in on one specific application field of Earth Observation Brings the latest scientific advances and perspectives from experts around the world Includes extensive figures, tables, and case studies to illustrate real-life applications

Structural Failure and Plasticity - X.L. Zhao 2000-10-04

As mankind continues to push back the boundaries and begins to explore other worlds and the ocean depths, a thorough understanding of how structures behave when subjected to extremes in temperature, pressure, and high loading rates will be essential. This symposium provided the perfect forum for presenting research into structures subjected to such extreme loads. There were a large number of papers presented under topics of impact, blast and shock loading, indicating a strong research interest in high rates of loading. Similarly new topics have been added to the traditional symposium list such as fire loading, earthquake loading, and fatigue and connection failures. It is clear now that fundamental knowledge of plastic deformation of structures to various extreme loads is coming of age. Each full paper was peer reviewed by at least two experts in the field.

Proceedings of the 7th International Conference on Discrete Element Methods - Xikui Li 2016-12-01

This book presents the latest advances in Discrete Element Methods (DEM) and technology. It is the proceeding of 7th International Conference on DEM which was held at Dalian University of Technology on August 1 - 4, 2016. The subject of this book are the DEM and related computational techniques such as DDA, FEM/DEM, molecular dynamics, SPH, Meshless methods, etc., which are the main computational methods for modeling discontinua. In comparison to continua which have been already studied for a long time, the research of discontinua is relatively new, but increases dramatically in recent years and has already become an important field. This book will benefit researchers and scientists from the academic fields of physics, engineering and applied mathematics, as well as from industry and national laboratories who are interested in the DEM.

Rock Dynamics: Progress and Prospect, Volume 2 - Jianchun Li 2022-12-06

Rock Dynamics: Progress and Prospect contains 153 scientific and technical papers presented at the Fourth International Conference on Rock Dynamics and Applications (RocDyn-4, Xuzhou, China, 17-19 August 2022). The two-volume set has 7 sections. Volume 1 includes the first four sections with 6 keynotes and 5 young scholar plenary session papers, and contributions on analysis and theoretical development, and experimental testing and techniques. Volume 2 contains the remaining three sections with 74 papers on numerical modelling and methods, seismic and earthquake engineering, and rock excavation and engineering. Rock Dynamics: Progress and Prospect will serve as a reference on developments in rock dynamics scientific research and on rock dynamics engineering applications. The previous volumes in this series (RocDyn-1, RocDyn-2, and RocDyn-3) are also available via CRC Press.

Rock Mechanics and Rock Engineering: From the Past to the Future - Reşat Ulusay 2016-11-18

Rock Mechanics and Rock Engineering: From the Past to the Future contains the contributions presented at EUROCK2016, the 2016 International Symposium of the International Society for Rock Mechanics (ISRM 2016, Ürgüp, Cappadocia Region, Turkey, 29-31 August 2016). The contributions cover almost all aspects of rock mechanics and rock engineering from theories to engineering practices, emphasizing the future direction of rock engineering technologies. The 204 accepted papers and eight keynote papers, are grouped into several main sections: - Fundamental rock mechanics - Rock properties and experimental rock mechanics - Analytical and numerical methods in rock engineering - Stability of slopes in civil and mining engineering - Design methodologies and analysis - Rock dynamics, rock mechanics and rock engineering at historical sites and monuments - Underground excavations in civil and mining engineering - Coupled processes in rock mass for underground storage and waste disposal - Rock mass characterization - Petroleum geomechanics - Carbon dioxide sequestration - Instrumentation-monitoring in rock engineering and back analysis - Risk management, and - the 2016 Rocha Medal Lecture and the 2016 Franklin Lecture Rock Mechanics and Rock Engineering: From the Past to the Future will be of interest to researchers and professionals involved in the various branches of rock mechanics and rock engineering. EUROCK 2016, organized by the Turkish National Society for Rock Mechanics, is a continuation of the successful series of ISRM symposia in Europe, which began in 1992 in Chester, UK.

The Professional Engineer and the Law - V. W. Quinn 1988

Australian National Bibliography: 1992 - National Library of Australia 1988

American Environmentalism - J. Michael Martinez 2013-06-20

Protecting the natural environment and promoting sustainability have become important objectives, but achieving such goals presents myriad challenges for even the most committed environmentalist. American Environmentalism: Philosophy, History, and Public Policy examines whether competing interests can be reconciled while developing consistent, coherent, effective public policy to regulate uses and protection of the natural environment without destroying the national economy. It then reviews a range of possible solutions. The book delves into key normative concepts that undergird American perspectives on nature by providing an overview of philosophical concepts found in the western intellectual tradition, the presuppositions inherent in neoclassical economics, and anthropocentric (human-centered) and biocentric (earth-centered) positions on sustainability. It traces the evolution of attitudes about nature from the time of the Ancient Greeks through Europeans in the Middle Ages and the Renaissance, the Enlightenment and the American Founders, the nineteenth and twentieth centuries, and up to the present. Building on this foundation, the author examines the political landscape as non-governmental organizations (NGOs), industry leaders, and government officials struggle to balance industrial development with environmental concerns. Outrageous claims, silly misrepresentations, bogus arguments, absurd contentions, and overblown prophecies of impending calamities are bandied about by many parties on all sides of the debate—industry spokespeople, elected representatives, unelected regulators, concerned citizens, and environmental NGOs alike. In lieu of descending into this morass, the author circumvents the silliness to explore the crucial issues through a more focused, disciplined approach. Rather than engage in acrimonious debate over minutiae, as so often occurs in the context of "green" claims, he recasts the issue

in a way that provides a cohesive look at all sides. This effort may be quixotic, but how else to cut the Gordian knot?

Tertiary Online Teaching and Learning - Stephen McKenzie 2020-12-17

This book is the first comprehensive and integrated guide to online education. It systematically presents all aspects of the emerging "big picture" of online education, providing a broad range of information and insights from online experts, learners, teachers, developers and researchers. The book introduces readers to online education and reveals its potential for bringing about a paradigm shift in education. It describes avenues for increasing the value of the online education medium and examines techniques for improving the online student experience. It also offers a wealth of real-world examples and experiences and shares recommendations on how to improve them, provided by students, teachers, developers, and researchers. Accordingly, the book equips readers - including online learners, teachers, researchers, developers, and administrators - to optimally participate in and contribute to current and future online education advances.

Symposium on Medium Combination Vehicles - 1988

Advances in FRP Composites in Civil Engineering - Lieping Ye 2012-02-01

"Advances in FRP Composites in Civil Engineering" contains the papers presented at the 5th International Conference on Fiber Reinforced Polymer (FRP) Composites in Civil Engineering in 2010, which is an official conference of the International Institute for FRP in Construction (IIFC). The book includes 7 keynote papers which are presented by top professors and engineers in the world and 203 papers covering a wide spectrum of topics. These important papers not only demonstrate the recent advances in the application of FRP composites in civil engineering, but also point to future research endeavors in this exciting area.

Researchers and professionals in the field of civil engineering will find this book is exceedingly valuable.

Prof. Lieping Ye and Dr. Peng Feng both work at the Department of Civil Engineering, Tsinghua University, China. Qingrui Yue is a Professor at China Metallurgical Group Corporation.

Advances in Applied Mechanics - Daniel S. Balint 2020-10-23

Advances in Applied Mechanics, Volume 53 in this ongoing series, highlights new advances in the field, with this new volume presenting interesting chapters on Phase field modelling of fracture, Advanced geometry representations and tools for microstructural and multiscale modelling, The material point method: the past and the future, From Experimental Modeling of Shotcrete to Large Scale Numerical Simulations of Tunneling, and Material point method after 25 years: theory, implementation, applications. Provides the authority and expertise of leading contributors from an international board of authors Presents the latest release in the Advances in Applied Mechanics series

Multiphysical Testing of Soils and Shales - Lyesse Laloui 2012-08-22

Significant advancements in the experimental analysis of soils and shales have been achieved during the last few decades. Outstanding progress in the field has led to the theoretical development of geomechanical theories and important engineering applications. This book provides the reader with an overview of recent advances in a variety of advanced experimental techniques and results for the analysis of the behaviour of geomaterials under multiphysical testing conditions. Modern trends in experimental geomechanics for soils and shales are discussed, including testing materials in variably saturated conditions, non-isothermal experiments, micro-scale investigations and image analysis techniques. Six theme papers from leading researchers in experimental geomechanics are also included. This book is intended for postgraduate students, researchers and practitioners in fields where multiphysical testing of soils and shales plays a fundamental role, such as unsaturated soil and rock mechanics, petroleum engineering, nuclear waste storage engineering, unconventional energy resources and CO₂ geological sequestration.

Analytical Treatment of Some Non-classical Problems in Structural Optimization - G. I. N. Rozvany 1974

Bridge Design, Assessment and Monitoring - Airong Chen 2018-12-07

Bridges play important role in modern infrastructural system. This book provides an up-to-date overview of the field of bridge engineering, as well as the recent significant contributions to the process of making

rational decisions in bridge design, assessment and monitoring and resources optimization deployment for the purpose of enhancing the welfare of society. Tang specifies the purposes and requirements of the conceptual bridge design, considering bridge types, basic elements, structural systems and load conditions. Cremona and Poulin propose an assessment procedure for existing bridges. Kallias et al. develop a framework for the performance assessment of metallic bridges under atmospheric exposure by integrating coating deterioration and corrosion modelling. Soriano et al. employ a simplified approach to estimate the maximum traffic load effect on a highway bridge and compare the results with other approaches based on on-site weigh-in-motion data. Akiyama et al. propose a method for reliability-based durability design and service life assessment of reinforced concrete deck slab of jetty structures. Chen et al. propose a meso-scale model to simulate the uniform and pitting corrosion of rebar in concrete and to obtain the crack patterns of the concrete with different rebar arrangements. Ruan et al. present a traffic load model for long span multi-pylon cable-stayed bridges. Khuc and Catbas implement a non-target vision-based method for the measurement of both static and dynamic displacements time histories. Finally, Cruz presents the career of the outstanding bridge engineer Edgar Cardoso in the fields of bridge design and experimental analysis. The book serves as a valuable reference to all concerned with bridge structure and infrastructure systems, including students, researchers, engineers, consultants and contractors from all areas sections of bridge engineering. The chapters originally published as a special issue in Structure and Infrastructure Engineering.

The PLP Algorithm - D. E. Charrett 1971

Robust Adaptive Control - G.C. Goodwin 2014-05-23

The workshop brought together international experts in the field of robust adaptive control to present recent developments in the area. These indicated that the theory of adaptive control is moving closer to applications and is beginning to give realistic guidelines useful in practical situations. The proceedings also focused on the value of such practical features as filtering, normalization, deadzones and unification of robust control and adaptation.

Deflection Calculations in the Plastic Design of Structures - R. E. Melchers 1979

Current Perspectives and New Directions in Mechanics, Modelling and Design of Structural Systems - Alphonse Zingoni 2022-09-02

Current Perspectives and New Directions in Mechanics, Modelling and Design of Structural Systems comprises 330 papers that were presented at the Eighth International Conference on Structural Engineering, Mechanics and Computation (SEMC 2022, Cape Town, South Africa, 5-7 September 2022). The topics featured may be clustered into six broad categories that span the themes of mechanics, modelling and engineering design: (i) mechanics of materials (elasticity, plasticity, porous media, fracture, fatigue, damage, delamination, viscosity, creep, shrinkage, etc); (ii) mechanics of structures (dynamics, vibration, seismic response, soil-structure interaction, fluid-structure interaction, response to blast and impact, response to fire, structural stability, buckling, collapse behaviour); (iii) numerical modelling and experimental testing (numerical methods, simulation techniques, multi-scale modelling, computational modelling, laboratory testing, field testing, experimental measurements); (iv) design in traditional engineering materials (steel, concrete, steel-concrete composite, aluminium, masonry, timber); (v) innovative concepts, sustainable engineering and special structures (nanostructures, adaptive structures, smart structures, composite structures, glass structures, bio-inspired structures, shells, membranes, space structures, lightweight structures, etc); (vi) the engineering process and life-cycle considerations (conceptualisation, planning, analysis, design, optimization, construction, assembly, manufacture, maintenance, monitoring, assessment, repair, strengthening, retrofitting, decommissioning). Two versions of the papers are available: full papers of length 6 pages are included in the e-book, while short papers of length 2 pages, intended to be concise but self-contained summaries of the full papers, are in the printed book. This work will be of interest to civil, structural, mechanical, marine and aerospace engineers, as well as planners and architects.