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Issues in Global Environment—Biology and Geoscience: 2013 Edition 2013-05-01 Issues in Global Environment—Biology and Geoscience: 2013 Edition is a ScholarlyEditions™ book that delivers timely, authoritative, and comprehensive information about Wildlife Research. The editors have built Issues in Global Environment—Biology and Geoscience: 2013 Edition on the vast information databases of ScholarlyNews.™ You can expect the information about Wildlife Research in this book to be deeper than what you can access anywhere else, as well as consistently reliable, authoritative, informed, and relevant. The content of Issues in Global Environment—Biology and Geoscience: 2013 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/.

Geotechnics for Sustainable Infrastructure Development Phung Duc Long 2019-11-28 This book presents 09 keynote and invited lectures and 177 technical papers from the 4th International Conference on Geotechnics for Sustainable Infrastructure Development, held on 28-29 Nov 2019 in Hanoi, Vietnam. The papers come from 35 countries of the five different continents, and are grouped in six conference themes: 1) Deep Foundations; 2) Tunnelling and Underground Spaces; 3) Ground Improvement; 4) Landslide and Erosion; 5) Geotechnical Modelling and Monitoring; and 6) Coastal Foundation Engineering. The keynote lectures are devoted by Prof. Harry Poulos (Australia), Prof. Adam Bezuijen (Belgium), Prof. Delwyn Fredlund (Canada), Prof. Lidija Zdravkovic (UK), Prof. Masaki Kitazume (Japan), and Prof. Mark Randolph (Australia). Four invited lectures are given by Prof. Charles Ng, ISSMGE President, Prof.Eun Chul Shin, ISSMGE Vice-President for Asia, Prof. Norikazu Shimizu (Japan), and Dr.Kenji Mori (Japan).

Behavior of Pipe Piles in Sand Magued Iskander 2011-01-17 One of the major difficulties in predicting the capacity of pipe piles in sand has resulted from a lack of understanding of the physical processes that control the behavior of piles during installation and loading. This monograph presents a detailed blue print for developing experimental facilities necessary to identify these processes. These facilities include a unique instrumented double-walled pipe-pile that is used to delineate the frictional stresses acting against the external and internal surfaces of the pile. The pile is fitted with miniature pore-pressure transducers to monitor the generation of pore water pressure during installation and loading. A fast automatic laboratory pile hammer capable of representing the phenomena that occur during pile driving was also developed and used.

ICP Design Methods for Driven Piles in Sands and Clays Richard Jardine 2005 While axial capacity is often the governing design criterion with driven piles, the reliability of predictions made by conventional procedures is generally poor. A long-term research program run at Imperial College London in conjunction with Industry, the UKs Health and Safety Executive and Engineering and Physical Sciences Research Council led to the new design recommendations published by Jardine and Chow in 1996. Their procedures offered considerable improvements and have been applied worldwide in many offshore, marine and onshore projects.

Physical Modelling in Geotechnics, Volume 1 Andrew McNamara 2018-07-11 Physical Modelling in Geotechnics collects more than 1500 pages of peer-reviewed papers written by researchers from over 30 countries, and presented at the 9th International Conference on Physical Modelling in Geotechnics 2018 (City, University of London, UK 17-20 July 2018). The ICPMG series has grown such that two volumes of proceedings were required to publish all contributions. The books represent a substantial body of work in four years. Physical Modelling in Geotechnics contains 230 papers, including eight keynote and themed lectures representing the state-of-the-art in physical modelling research in aspects as diverse as fundamental modelling including sensors, imaging, modelling techniques and scaling, onshore and offshore foundations, dams and embankments, retaining walls and deep excavations, ground improvement and environmental engineering, tunnels and geohazards including significant contributions in the area of seismic engineering. ISSMGE TC104 have identified areas for special attention including education in physical modelling and the promotion of physical modelling to industry. With this in mind there is a special themed paper on education, focusing on both undergraduate and postgraduate teaching as well as practicing geotechnical engineers. Physical modelling has entered a new era with the advent of exciting work on real time interfaces between physical and numerical modelling and the growth of facilities and expertise that enable development of so called 'megafuges' of 1000gtonne capacity or more; capable of modelling the largest and most complex of geotechnical challenges. Physical Modelling in Geotechnics will be of interest to professionals, engineers and academics interested or involved in geotechnics, geotechnical engineering and related areas. The 9th International Conference on Physical Modelling in Geotechnics was organised by the Multi Scale Geotechnical Engineering Research Centre at City, University of London under the auspices of Technical Committee 104 of the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE). City, University of London, are pleased to host the prestigious international conference for the first time having initiated and hosted the first regional conference, Eurofuge, ten years ago in 2008. Quadrennial regional conferences in both Europe and Asia are now well established events giving doctoral researchers, in particular, the opportunity to attend an international conference in this rapidly evolving specialist area. This is volume 1 of a 2-volume set.

New Horizons in Piling Malcolm D. Bolton 2021-01-24 The piling industry has, in recent years, developed a variety of press-in piling technologies with a view to mitigate noise & vibration nuisance. This book focuses on the "Walk-on-Pile" type press-in piling system, which offers an alternative engineering solution for piling works. This type of piling has unique features, including the application of the compact piling machine using pre-installed piles as a source of reaction force to jack in a new pile by hydraulic pressure. Moreover, the machine can walk along the top of piles already installed, thus enabling piling in a limited space and headroom with minimum disruption to social functions and services of existing infrastructure. These features are opening up a new horizon in piling, leading to novel application of embedded walls previously considered impossible. This introductory book provides a historical development of press-in piling and various challenging applications worldwide as well as scientific research outcomes, forming a valuable source of reference for readers who are unfamiliar with press-in piling, including project owners, design engineers, practical engineers as well as researchers and students.

Modern Applications of Geotechnical Engineering and Construction Mahdi O. Karkush 2020-12-21 p="" This book contains select papers from the International Conference on Geotechnical Engineering Iraq discussing the challenges, opportunities, and problems of application of geotechnical engineering in projects. The contents cover a wide spectrum of themes in geotechnical engineering, including but not limited to sustainability & geotechnical engineering, modeling of foundations & slope stability, seismic analysis & soil mechanics, construction materials, and construction & management of projects. This volume will prove a valuable resource for practicing engineers and researchers in the field of geotechnical engineering, structural engineering, and construction and management of projects. ^

Soil-Foundation-Structure Interaction Rolando P. Orense 2010-07-20 Soil-Foundation-Structure Interaction contains selected papers presented at the International Workshop on Soil-Foundation-Structure Interaction held in Auckland, New Zealand from 26-27 November 2009. The workshop was the venue for an international exchange of ideas, disseminating information about experiments, numerical models and practical en

Deep Foundations 2002 Michael W. O'Neill 2002 Proceedings of the International Deep Foundations Congress 2002, held in Orlando, Florida, February 14-16, 2002. Sponsored by The Geo-Institute of ASCE. This Geotechnical Special Publication contains 110 papers documenting applied research and engineering experience in the area of deep foundations. The volume is a comprehensive resource for both researchers and practitioners covering driven, jacked, and augered piles and drilled shafts. Topics include: geotechnical design, structural design, innovative construction, validation and verification of design and construction, soil-structure interaction, reliability-based design, field load testing for design, concepts for deep foundation systems (such as piled rafts), numerical and analytical modeling of pile foundations, design of foundations for extreme events, and numerous and varied case histories. Several papers also focus on the acquisition and use of geomaterial properties for deep foundation design and the use of deep foundations in walls.

Applied Studies of Coastal and Marine Environments Maged Marghany 2016-09-14 The book ''Applied Studies of Coastal and Marine Environments'' is a collection of a number of high-quality and comprehensive work on coastal and marine environment. This book has an Introductory Chapter, followed by 15 chapters. Chapters 2 and 3 are devoted to coastal geological sedimentation and its impacts on marine environment. Consequently, Chapter 4 investigates neo-tectonic movement in the Pearl River Delta. Different aspects of the coastal pollution and its impacts are addressed in Chapter 5 through Chapter 13. Furthermore, coastal management is also discussed in Chapter 14, and monitoring the coastal environment using remote sensing and GIS techniques is reported in Chapter 15. Finally, Chapter 16 addresses the human history of maritime exploitation and adaptation process to coastal and marine environments. It is important to investigate the history of maritime exploitation and adaptation to environment coastal zone to learn how to explore the oceans.

Physical Modelling in Geotechnics, Two Volume Set Sarah Springman 2010-06-17 This book results from the 7th ICPMG meeting in Zurich 2010 and covers a broad range of aspects of physical modelling in geotechnics, linking across to other modelling techniques to consider the entire spectrum required in providing innovative geotechnical engineering solutions. Topics presented at the conference: Soil - Structure - Interaction; Natural Hazards; Earthquake Engineering: Soft Soil Engineering; New Geotechnical Physical; Modelling Facilities; Advanced Experimental Techniques; Comparisons between Physical and Numerical Modelling Specific Topics: Offshore Engineering; Ground Improvement and Foundations; Tunnelling, Excavations and Retaining Structures; Dams and slopes; Process Modelling; Goenvironmental Modelling; Education

Proceedings of the Second International Conference on Press-in Engineering 2021, Kochi, Japan Tatsunori Matsumoto 2021-06-23 The Second International Conference on Press-in Engineering (ICPE) 2021 was organized by the International Press-in Association (IPA). The conference is held every three years and the main theme this time is "Evolution and Social Contribution of Press-in Engineering for Infrastructure Development, and Disaster Prevention and Mitigation". These proceedings contain 2 keynote lectures, 3 state-of-the-art lectures and about 60 papers from more than 10 countries. This publication provides good practice guidance on the application of the press-in piling method, to satisfy the requirements of geo-structures which are embedded utilizing prefabricated piles. It covers actual examples of the press-in piling method applied to various geo-structures, such as temporary and permanent retaining walls, cofferdams, cut-off walls, foundation piles etc. The content addresses the technical and construction issues relating to the selection of the appropriate type of press-in piling method, in accordance with required structural design criteria and soil and working conditions. The aim of this publication is to concisely describe practical uses of the press-in piling method for project owners, designers, contractors, academic researchers and other people in the construction industry.

The Application of Stress-wave Theory to Piles Jaime Alberto dos Santos 2008 "This conference was organized by Instituto Superior Tecnico under the auspices of: International Society of Soil mechanics and Geotechnical Engineering -- ISSMGE, TC18 on Deep Foundations and the Portuguese Geotechnical Society."--T.p. verso.

Proceedings of GeoShanghai 2018 International Conference: Advances in Soil Dynamics and Foundation Engineering TONG Qiu 2018-05-07 This book is the sixth volume of the proceedings of the 4th GeoShanghai International Conference that was held on May 27 - 30, 2018. This volume, entitled "Advances in Soil Dynamics and Foundation Engineering", covers the recent advances and technologies in soil dynamics and foundation engineering. These papers are grouped into four categories: (1) soil dynamics and earthquake engineering, (2) deep excavations and retaining structures, (3) shafts and deep foundations, and (4) offshore geotechnics. It presents the state-of-the-art theories, experiments, methodologies and findings in the related areas. The book may benefit researchers and scientists from the academic fields of soil dynamics and earthquake engineering, geotechnical engineering, geoenvironmental engineering, transportation engineering, geology, mining and energy, as well as practical engineers from the industry. Each of the papers included in this book received at least two positive peer reviews. The editors would like to express their sincerest appreciation to all of the anonymous reviewers all over the world, for their diligent work.

Advances in Analysis and Design of Deep Foundations Murad Abu-Farsakh 2017-07-11 This volume on "Advances in Analysis and Design of Deep Foundations" contains 22 technical papers which cover various aspects of analysis and design of deep foundations based on full-scale field testing, numerical modeling, and analytical solutions. The technical papers are 8-10 pages long that present the results and findings from research as well as practical-oriented studies on deep foundations that are of interest to civil/geotechnical engineering community. The topics cover a wide spectrum of applications that include evaluation of the axial and lateral capacity of piles, pile group effects, evaluation of the increase in pile capacity with time (or pile setup), influence of excavation on pile capacity, study the behavior of pile raft caisson foundations, evaluate the bearing capacity and settlement of piles from cone penetration tests, etc. This volume is part of the proceedings of the 1st GeoMEast International Congress and Exhibition on Sustainable Civil Infrastructures, Egypt 2017.

Canadian Geotechnical Journal 2008

Proceedings of the Indian Geotechnical Conference 2019 Satyajit Patel 2021 This book comprises select proceedings of the annual conference of the Indian Geotechnical Society. The conference brings together research and case histories on various aspects of geotechnical and geoenvironmental engineering. The book presents papers on geotechnical applications and case histories, covering topics such as (i) Characterization of Geomaterials and Physical Modelling; (ii) Foundations and Deep Excavations; (iii) Soil Stabilization and Ground Improvement; (iv) Geoenvironmental Engineering and Waste Material Utilization; (v) Soil Dynamics and Earthquake Geotechnical Engineering; (vi) Earth Retaining Structures, Dams and Embankments; (vii) Slope Stability and Landslides; (viii) Transportation Geotechnics; (ix) Geosynthetics Applications; (x) Computational, Analytical and Numerical Modelling; (xi) Rock Engineering, Tunnelling and Underground Constructions; (xii) Forensic Geotechnical Engineering and Case Studies; and (xiii) Others Topics: Behaviour of Unsaturated Soils, Offshore and Marine Geotechnics, Remote Sensing and GIS, Field Investigations, Instrumentation and Monitoring, Retrofitting of Geotechnical Structures, Reliability in Geotechnical Engineering, Geotechnical Education, Codes and Standards, and other relevant

topics. The contents of this book are of interest to researchers and practicing engineers alike.
Application of Stress-wave Theory to Piles Frans B. J. Barends 2022-06-03 Comprising 97 papers on Geotechnical & environmental aspects (Pile-soil modelling, vibrations); Dynamic testing (Equipment & data acquisition systems); Performance during installation (Driving equipment, hammer-pile-soil system); Reliability of predictions (Theory versus experiment and simulation). Each part starts with a lecture by invited keynote speakers; followed by a general report on the papers. New themes considered are environmental aspects related to vibration and noise & the reliability of predictions emphasizing the validation of theoretical methods & practical experience.
Determination of Axial Pile Capacity of Prestressed Concrete Cylinder Piles M. C. McVay 2004 ABSTRACT: During pile installation, soil enters the annular region of the pile tip forming a column of soil. The length of this column has to be estimated in the drivability analysis, and the state of plug has to be determined for calculating the end bearing. The pile installation process was modeled using the finite element, and a parametric study was performed to study the factors impacting the formation of the soil plug.
Model Uncertainties in Foundation Design Chong Tang 2021-03-17 Model Uncertainties in Foundation Design is unique in the compilation of the largest and the most diverse load test databases to date, covering many foundation types (shallow foundations, spudcans, driven piles, drilled shafts, rock sockets and helical piles) and a wide range of ground conditions (soil to soft rock). All databases with names prefixed by NUS are available upon request. This book presents a comprehensive evaluation of the model factor mean (bias) and coefficient of variation (COV) for ultimate and serviceability limit state based on these databases. These statistics can be used directly for AASHTO LRFD calibration. Besides load test databases, performance databases for other geo-structures and their model factor statistics are provided. Based on this extensive literature survey, a practical three-tier scheme for classifying the model uncertainty of geo-structures according to the model factor mean and COV is proposed. This empirically grounded scheme can underpin the calibration of resistance factors as a function of the degree of understanding - a concept already adopted in the Canadian Highway Bridge Design Code and being considered for the new draft for Eurocode 7 Part 1 (EN 1997-1:202x). The helical pile research in Chapter 7 was recognised by the 2020 ASCE Norman Medal.
Advances in Deep Foundations Yoshiaki Kikuchi 2007-06-21 Civil Engineering has recently seen enormous progress in the core field of the construction of deep foundations. This book is the result of the International Workshop on Recent Advances in Deep Foundations (IWDPF07), which was held in Yokosuka, Japan from the 1st to the 2nd of February, 2007. Topics under discussion in this book include recent rese
Electromagnetic Boundary Problems Edward F. Kuester 2015-09-15 Electromagnetic Boundary Problems introduces the formulation and solution of Maxwell's equations describing electromagnetism. Based on a one-semester graduate-level course taught by the authors, the text covers material parameters, equivalence principles, field and source (stream) potentials, and uniqueness, as well as: Provides analytical solutions of waves in regions with planar, cylindrical, spherical, and wedge boundaries Explores the formulation of integral equations and their analytical solutions in some simple cases Discusses approximation techniques for problems without exact analytical solutions Presents a general proof that no classical electromagnetic field can travel faster than the speed of light Features end-of-chapter problems that increase comprehension of key concepts and fuel additional research Electromagnetic Boundary Problems uses generalized functions consistently to treat problems that would otherwise be more difficult, such as jump conditions, motion of wavefronts, and reflection from a moving conductor. The book offers valuable insight into how and why various formulation and solution methods do and do not work.
Soil Dynamics and Foundation Modeling Junbo Jia 2017-11-26 This book presents a comprehensive topical overview on soil dynamics and foundation modeling in offshore and earthquake engineering. The spectrum of topics include, but is not limited to, soil behavior, soil dynamics, earthquake site response analysis, soil liquefactions, as well as the modeling and assessment of shallow and deep foundations. The author provides the reader with both theory and practical applications, and thoroughly links the methodological approaches with engineering applications. The book also contains cutting-edge developments in offshore foundation engineering such as anchor piles, suction piles, pile torsion modeling, soil ageing effects and scour estimation. The target audience primarily comprises research experts and practitioners in the field of offshore engineering, but the book may also be beneficial for graduate students.
Basics of Foundation Design Bengt Fellenius 2017-06-07 The "Red Book" presents a background to conventional foundation analysis and design. The text is not intended to replace the much more comprehensive 'standard' textbooks, but rather to support and augment these in a few important areas, supplying methods applicable to practical cases handled daily by practising engineers and providing the basic soil mechanics background to those methods. It concentrates on the static design for stationary foundation conditions. Although the topic is far from exhaustively treated, it does intend to present most of the basic material needed for a practising engineer involved in routine geotechnical design, as well as provide the tools for an engineering student to approach and solve common geotechnical design problems.
Design Guides for Offsho... P. Le Tirant
Proceedings of the ... Southeast Asian Geotechnical Conference 1985
Application of Stress-Wave Theory to Piles: Quality Assurance on Land and Offshore Piling J. Beim 2014-04-21 This work collates the topics discussed in the sixth International Conference on land and offshore piling. It covers topics such as: wave mechanics and its application to pile mechanics; driving equipment and developments; and pile integrity and low strain dynamic testing.
Marine Structural Design Calculations Mohamed El-Reedy 2014-09-30 The perfect guide for veteran structural engineers or for engineers just entering the field of offshore design and construction, Marine Structural Design Calculations offers structural and geotechnical engineers a multitude of worked-out marine structural construction and design calculations. Each calculation is discussed in a concise, easy-to-understand manner that provides an authoritative guide for selecting the right formula and solving even the most difficult design calculation. Calculation methods for all areas of marine structural design and construction are presented and practical solutions are provided. Theories, principles, and practices are summarized. The concentration focuses on formula selection and problem solving. A "quick look up guide , Marine Structural Design Calculations includes both fps and SI units and is divided into categories such as Project Management for Marine Structures; Marine Structures Loads and Strength; Marine Structure Platform Design; and Geotechnical Data and Pile Design. The calculations are based on industry code and standards like American Society of Civil Engineers and American Society of Mechanical Engineers, as well as institutions like the American Petroleum Institute and the US Coast Guard. Case studies and worked examples are included throughout the book. Calculations are based on industry code and standards such as American Society of Civil Engineers and American Society of Mechanical Engineers Complete chapter on modeling using SACS software and PDMS software Includes over 300 marine structural construction and design calculations Worked-out examples and case studies are provided throughout the book Includes a number of checklists, design schematics and data tables
ICPMG2014 - Physical Modelling in Geotechnics Christophe Gaudin 2019-01-08 The 8th International Conference on Physical Modelling in Geotechnics (ICPMG2014) was organised by the Centre for Offshore Foundation Systems at the University of Western Australia under the auspices of the Technical Committee 104 for Physical Modelling in Geotechnics of the International Society of Soil Mechanics and Geotechnical Engineering. This quadrennial conference is the traditional focal point for the physical modelling community of academics, scientists and engineers to present and exchange the latest developments on a wide range of physical modelling aspects associated with geotechnical engineering. These proceedings, together with the seven previous proceedings dating from 1988, present an inestimable collection of the technical and scientific developments and breakthroughs established over the last 25 years. These proceedings include 10 keynote lectures from scientific leaders within the physical modelling community and 160 peer-reviewed papers from 26 countries. They are organised in 14 themes, presenting the latest developments in physical modelling technology, modelling techniques and sensors, through a wide range of soil-structure interaction problems, including shallow and deep foundations, offshore geotechnics, dams and embankments, excavations and retaining structures and slope stability. Fundamental aspects of earthquake engineering, geohazards, ground reinforcements and improvements, and soil properties and behaviour are also covered, demonstrating the increasing complexity of modelling arising from state-of-the-art technological developments and increased understanding of similitude principles. A special theme on education presents the latest developments in the use of physical modelling techniques for instructing undergraduate and postgraduate students in geotechnical engineering.
Numerical Methods in Geotechnical Engineering Thomas Benz 2010-05-25 Numerical Methods in Geotechnical Engineering contains 153 scientific papers presented at the 7th European Conference on Numerical Methods in Geotechnical Engineering, NUMGE 2010, held at Norwegian University of Science and Technology (NTNU) in Trondheim, Norway, 2 4 June 2010.The contributions cover topics from emerging research to engineering pra
Petroleum Abstracts 1996
Frontiers in Offshore Geotechnics Susan Gourvenec 2005-10-13 This book addresses current and emerging challenges facing those working in offshore construction, design and research. Keynote papers from leading industry practitioners and academics provide a comprehensive overview of central topics covering deepwater anchoring, pipelines, foundation solutions for offshore wind turbines, site investigation, geoh
Construction in Geotechnical Engineering Madhavi Latha Gali 2020-09-12 This volume comprises select papers presented during the Indian Geotechnical Conference 2018. This volume discusses construction challenges and issues in geotechnical engineering. The contents cover foundation design and analysis, issues related to geotechnical structures, including dams, retaining walls, embankments and pavements, and rock mechanics and construction in rocks and rocky environments. Many of the papers discuss live case studies related to important geotechnical engineering projects worldwide, providing useful insights into the realistic designs and constructions. This volume will be of interest to students, researchers and practitioners alike.
Offshore Structures Mohamed A. El-Reedy 2019-11-06 Offshore Structures: Design, Construction and Maintenance, Second Edition covers all types of offshore structures and platforms employed worldwide. As the ultimate reference for selecting, operating and maintaining offshore structures, this book provides a roadmap for designing structures which will stand up even in the harshest environments. Subsea pipeline design and installation is also covered in this edition, as is the selection of the proper type of offshore structure, the design procedure for the fixed offshore structure, nonlinear analysis (Push over) as a new technique to design and assess the existing structure, and more. With this book in hand, engineers will have the most up-to-date methods for performing a structural lifecycle analysis, implementing maintenance plans for topsides and jackets and using non-destructive testing. Provides a one-stop guide to offshore structure design and analysis Presents easy-to-understand methods for structural lifecycle analysis Contains expert advice for designing offshore platforms for all types of environments
Journal of Geotechnical Engineering 1993
Fiber Optic Sensors for Structural and Geotechnical Monitoring Michele Arturo Caponero 2020-12-02 The use of sensors based on fibre optic technology allows a broad range of applications in the fields of structural and geotechnical monitoring, which can effectively improve the maintenance of infrastructures and the safety of communities. Thanks to its valuable features, such as distributed monitoring, the easiness and endurance of cabling, long term stability, reliable responses in both static and dynamic regimes and fibre optic technology, innovative and efficient solutions to quite difficult monitoring problems have already been provided. The increasing worldwide attention to infrastructures and communities with resilience capabilities against natural disasters has opened up new and challenging perspectives of applications to the use of fibre optic technology for structural and geotechnical monitoring. This book collects contributions in the development and application of monitoring solutions, based on fibre optic technology for structural and geotechnical engineering works and issues. In the book preface, the content of the contributions is reviewed, pointing out the relevance of the work, with respect to the advance and spreading of fibre optic technology for monitoring applications. All contributions provide a comprehensive discussion and report a rich bibliography on the current trends and issues relative to the theme of the work presented.
Behavior Pf Pipe Piles in Sand Magued Iskander 2010
Rapid Penetration into Granular Media Magued Iskander 2015-07-10 Rapid Penetration into Granular Media: Visualizing the Fundamental Physics of Rapid Penetration introduces readers to the variety of methods developed to visualize, observe, and model the rapid penetration of natural and man-made projectiles into earth materials while providing seasoned practitioners with a standard reference that showcases the topic's most recent developments in research and application. There has been a flurry of recently funded research both in the U.S. and Europe on studying the behavior of projectiles in granular media. This book compiles the findings of recent research on the subject and outlines the fundamental physics of rapid earth penetration, and assembles a comprehensive collection of experimental and numerical techniques to study the problem. Presents a comprehensive interdisciplinary review of the latest research developments in the response of granular media to impact and impulsive loading Combines the experience of prominent researchers from different disciplines focusing on the challenges presented by impact loading of granular media Introduces recently developed methods for visualizing the fundamental physics of rapid penetration into granular media
Pile Design and Construction Practice Willis H. Thomas 2007-12-06 This international handbook is essential for geotechnical engineers and engineering geologists responsible for designing and constructing piled foundations. It explains general principles and practice and details current types of pile, piling equipment and methods. It includes calculations of the resistance of piles to compressive loads, pile group
Handbook of Port and Harbor Engineering Gregory Tsinker 2014-11-14 This indispensable handbook provides state-of-the-art information and common sense guidelines, covering the design, construction, modernization of port and harbor related marine structures. The design procedures and guidelines address the complex problems and illustrate factors that should be considered and included in appropriate design scenarios.