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KEY=OFFSHORE - SIMS BARRERA

OFFSHORE GEOTECHNICAL ENGINEERING

CRC Press Design practice in offshore geotechnical engineering has grown out of onshore practice, but the two application areas have tended to diverge over the last thirty years, driven partly by the scale of the foundation and anchoring elements used offshore, and partly by fundamental differences in construction and installation techniques. As a consequence offshore geotechnical engineering has grown as a speciality. The structure of Offshore Geotechnical Engineering follows a pattern that mimics the flow of a typical offshore project. In the early chapters it provides a brief overview of the marine environment, offshore site investigation techniques and interpretation of soil behaviour. It proceeds to cover geotechnical design of piled foundations, shallow foundations and anchoring systems. Three topics are then covered which require a more multi-disciplinary approach: the design of mobile drilling rigs, pipelines and geohazards. This book serves as a framework for undergraduate and postgraduate courses, and will appeal to professional engineers specialising in the offshore industry.

OFFSHORE GEOTECHNICAL ENGINEERING

PRINCIPLES AND PRACTICE

Thomas Telford Services Limited With activity in the engineering of offshore structures increasing around the world, this title offers an introduction to many of the core design and assessment skills required of those working in the sector, in accordance with the latest codes and standards.

FRONTIERS IN OFFSHORE GEOTECHNICS III

CRC Press Frontiers in Offshore Geotechnics III comprises the contributions presented at the Third International Symposium on Frontiers in Offshore Geotechnics (ISFOG, Oslo, Norway, 10-12 June 2015), organised by the Norwegian Geotechnical

Institute (NGI). The papers address current and emerging geotechnical engineering challenges facing those working in off

FRONTIERS IN OFFSHORE GEOTECHNICS II

CRC Press *Frontiers in Offshore Geotechnics II* comprises the Proceedings of the Second International Symposium on Frontiers in Offshore Geotechnics (ISFOG), organised by the Centre for Offshore Foundation Systems (COFS) and held at the University of Western Australia (UWA), Perth from 8-10 November 2010. The volume addresses current and emerging challenges

PROCEEDINGS OF THE 1ST VIETNAM SYMPOSIUM ON ADVANCES IN OFFSHORE ENGINEERING

ENERGY AND GEOTECHNICS

Springer These proceedings gather a selection of refereed papers presented at the 1st Vietnam Symposium on Advances in Offshore Engineering (VSOE 2018), held on 1-3 November 2018 in Hanoi, Vietnam. The contributions from researchers, practitioners, policymakers, and entrepreneurs address technological and policy changes intended to promote renewable energies, and to generate business opportunities in oil and gas and offshore renewable energy. With a special focus on energy and geotechnics, the book brings together the latest lessons learned in offshore engineering, technological innovations, cost-effective and safer foundations and structural solutions, environmental protection, hazards, vulnerability, and risk management. The book offers a valuable resource for all graduate students, researchers and industrial practitioners working in the fields of offshore engineering and renewable energies.

OFFSHORE GEOTECHNICAL ENGINEERING

"Design practice in offshore geotechnical engineering has grown out of onshore practice, but the two application areas have tended to diverge over the last thirty years, driven partly by the scale of the foundation and anchoring elements used offshore, and partly by fundamental differences in construction and installation techniques. As a consequence offshore geotechnical engineering has grown as a speciality. The structure of *Offshore Geotechnical Engineering* follows a pattern that mimics the flow of a typical offshore project. In the early chapters it provides a brief overview of the marine environment, offshore site investigation techniques and interpretation of soil behaviour. It proceeds to cover geotechnical design of piled foundations, shallow foundations and anchoring systems. Three topics are then covered which require a more multi-disciplinary approach: the design of mobile drilling rigs, pipelines and geohazards. This book serves as a framework for undergraduate and postgraduate courses, and will appeal to professional engineers specialising in the offshore industry"--Provided by publisher.

ADVANCES IN OFFSHORE GEOTECHNICS

PROCEEDINGS OF ISOG2019

Springer Nature This book comprises select proceedings of the First Indian Symposium on Offshore Geotechnics. It addresses state of the art and emerging challenges in offshore design and construction. The theme papers from leading academicians and practitioners provide a comprehensive overview of the broad topics encompassing various challenges in offshore geotechnical engineering. It covers various aspects pertaining to offshore geotechnics, such as offshore site investigation, soil characterization, geotechnics related to offshore renewable energy converters, offshore foundations and anchoring systems, pipelines, and deep sea explorations. This volume provides a comprehensive reference for professionals and researchers in offshore, civil and maritime engineering and for soil mechanics specialists.

ENGINEERING CHALLENGES FOR SUSTAINABLE FUTURE

PROCEEDINGS OF THE 3RD INTERNATIONAL CONFERENCE ON CIVIL, OFFSHORE AND ENVIRONMENTAL ENGINEERING (ICCOEE 2016, MALAYSIA, 15-17 AUG 2016)

CRC Press Engineering Challenges for Sustainable Future contains the papers presented at the 3rd International Conference on Civil, Offshore & Environmental Engineering (ICCOEE2016, Kuala Lumpur, Malaysia, 15-17 August 2016), under the banner of World Engineering, Science & Technology Congress (ESTCON2016). The ICCOEE series of conferences started in Kuala Lumpur, Malaysia 2012, and the second event of the series took place in Kuala Lumpur, Malaysia 2014. This conference series deals with the civil, offshore & environmental engineering field, addressing the following topics: • Environmental and Water Resources Engineering • Coastal and Offshore Engineering • Structures and Materials • Construction and Project Management • Highway, Geotechnical and Transportation Engineering and Geo-informatics This book is an essential reading for academic, engineers and all professionals involved in the area of civil, offshore and environmental engineering.

FRONTIERS IN OFFSHORE GEOTECHNICS

PROCEEDINGS OF THE INTERNATIONAL SYMPOSIUM ON FRONTIERS IN OFFSHORE GEOTECHNICS (IS-FOG 2005), 19-21 SEPT 2005, PERTH, WA, AUSTRALIA

CRC Press 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, geohazards and emerging Australian frontiers. A further 125 peer reviewed papers introduce and analyse the critical challenges of offshore geotechnical engineering in the areas of the keynote subjects as well as piling, caissons and shallow foundation systems. The papers collected in these proceedings report a variety of numerical and theoretical investigations.

experimental programs and field experience, with established design methods discussed alongside state-of-the-art practices.

OFFSHORE AND NEARSHORE GEOTECHNICAL ENGINEERING

Routledge This title covers six themes: offshore geotechnical engineering, laboratory, in-situ and field testing and behaviour of soil, model testing, soil structure interaction, nearshore geotechnical engineering, and marine environmental geotechnics and soil improvement.

SOIL DYNAMICS AND FOUNDATION MODELING

OFFSHORE AND EARTHQUAKE ENGINEERING

Springer 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.

OFFSHORE OPERATIONS AND ENGINEERING

CRC Press This book provides a comprehensive understanding of each aspect of offshore operations including conventional methods of operations, emerging technologies, legislations, health, safety and environment impact of offshore operations. The book starts by coverage of notable offshore fields across the globe and the statistics of present oil production, covering all types of platforms available along with their structural details. Further, it discusses production, storage and transportation, production equipment, safety systems, automation, storage facilities and transportation. Book ends with common legislation acts and comparison of different legislation acts of major oil/gas producing nations. The book is aimed at professionals and researchers in petroleum engineering, offshore technology, subsea engineering, and Explores the engineering, technology, system, environmental, operational and legislation aspects of offshore productions systems Covers most of the subsea engineering material in a concise manner Includes legislation of major oil and gas producing nations pertaining to offshore operations (oil and gas) Incorporates case studies of major offshore operations (oil and gas) accidents and lessons learnt Discusses environment impact of offshore operations

INTERMEDIATE OFFSHORE FOUNDATIONS

Intermediate foundations are used as anchors for floating platforms and ancillary structures, foundations for steel jackets, and to support seafloor equipment and

offshore wind turbines. When installed by suction, they are an economical alternative to piling, and also may be completely removed. They are usually circular in plan and are essentially rigid when laterally loaded. Length to diameter embedment ratios, L/D , generally vary between 0.5 and 10, spanning the gap between shallow and deep foundations, although these are indicative boundaries and the response, rather than the embedment ratio, defines an intermediate foundation. The first chapters introduce foundation types; compare shallow, intermediate and deep foundation models and design; define unique design issues that make intermediate foundations distinct from shallow and deep foundations, as well as list their hazards that mainly occur during installation. Later chapters cover installation, in-place resistance and in-place response, and miscellaneous design considerations. There is no general agreement as to which design methods/models are appropriate, so models should only be as accurate as the data. Therefore, several reasonably accurate models are provided together with comprehensive discussion and advice. Example calculations and over 200 references are also included. This is the first book dedicated to the geotechnical design of intermediate foundations, and it will appeal to professional engineers specialising in the offshore industry.

ESSENTIALS OF OFFSHORE STRUCTURES

FRAMED AND GRAVITY PLATFORMS

CRC Press Essentials of Offshore Structures: Framed and Gravity Platforms examines the engineering ideas and offshore drilling platforms for exploration and production. This book offers a clear and acceptable demonstration of both the theory and application of the relevant procedures of structural, fluid, and geotechnical mechanics to offshore structures. It

OFFSHORE SITE INVESTIGATION AND FOUNDATION BEHAVIOUR

PAPERS PRESENTED AT A CONFERENCE ORGANIZED BY THE SOCIETY FOR UNDERWATER TECHNOLOGY AND HELD IN LONDON, UK, SEPTEMBER 22-24, 1992

Springer Science & Business Media Two main areas of offshore activity are addressed in this book: Site investigation on assessment; and Applications and foundation engineering. The 37 contributions from a wide ranging group of international experts, are resulting from the Offshore Site Investigation and Foundation Behaviour Conference, London, U.K., September 1992. Adequate determination of site conditions can only be achieved by the integrated approach of using geological, geophysical and geotechnical data. Developments in data acquisition techniques are illustrated through case histories in the section on Geotechnical Sampling and Testing. In the section on Advanced Interpretation Techniques and Integrated Interpretations the state of the art of these topics is also illustrated by case histories. A review of foundation behaviour is presented in the section on Gravity Foundations, Foundation Performance Monitoring, Piling Research and Design Criteria. These topics are illustrated in the light of field experience and recent research, in particular that involving full-scale tests and monitoring. This book

provides many illustrative figures and much pertinent information to exploration and marine geophysicists, petroleum and offshore engineers and for researchers working these fields.

MOORING SYSTEM ENGINEERING FOR OFFSHORE STRUCTURES

Gulf Professional Publishing The mooring system is a vital component of various floating facilities in the oil, gas, and renewables industries. However, there is a lack of comprehensive technical books dedicated to the subject. *Mooring System Engineering for Offshore Structures* is the first book delivering in-depth knowledge on all aspects of mooring systems, from design and analysis to installation, operation, maintenance and integrity management. The book gives beginners a solid look at the fundamentals involved during mooring designs with coverage on current standards and codes, mooring analysis and theories behind the analysis techniques. Advanced engineers can stay up-to-date through operation, integrity management, and practical examples provided. This book is recommended for students majoring in naval architecture, marine or ocean engineering, and allied disciplines in civil or mechanical engineering. Engineers and researchers in the offshore industry will benefit from the knowledge presented to understand the various types of mooring systems, their design, analysis, and operations. Understand the various types of mooring systems and the theories behind mooring analysis Gain practical experience and lessons learned from worldwide case studies Combine engineering fundamentals with practical applications to solve today's offshore challenges

FINITE ELEMENT ANALYSIS IN GEOTECHNICAL ENGINEERING

APPLICATION

Thomas Telford An insight into the use of the finite method in geotechnical engineering. The first volume covers the theory and the second volume covers the applications of the subject. The work examines popular constitutive models, numerical techniques and case studies.

NUMERICAL METHODS IN GEOTECHNICAL ENGINEERING

(NUMGE 2010)

CRC Press *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

SEAFLOOR PROCESSES AND GEOTECHNOLOGY

CRC Press An ideal resource for civil engineers working with offshore structures, pipelines, dredging, and coastal erosion, *Seafloor Processes and Geotechnology* bridges the gap between the standard soil mechanics curriculum of civil engineering and published material on marine geotechnology. Utilizing organized information on

sediments and foundations for marine applications from a variety of sources, it provides practical reference information and approaches for analysis and design. This book provides an understanding of the processes and loadings affecting the sediment/water interface and the sediment column on the continental shelf and slope as well as the abyssal plains. It outlines the geological and geotechnical factors that should be considered in an investigation, and provides practicing professionals with the information they need to analyze potential environmental hazards and problems in marine foundations and slope stability. It covers geology, site investigation, drilling and sampling sediments, material properties, foundation design, slope stability, and more. Exploring marine geotechnology from a historical perspective, this book: Describes the development of marine geotechnology, the marine environment, and the geology of the seabed Discusses the various elements of a site investigation Explains how to investigate a site by remote sensing over the macro scale, probing to look at a more defined area, and drilling and sampling at the micro scale Looks at the physical, acoustic, and geochemical properties of marine sediments at the micro scale Focuses on slope stability and marine foundations Seafloor Processes and Geotechnology provides the background for in situ investigation, drilling, soil sampling, and laboratory testing technologies and serves as a complete handbook for engineers, geologists, as well as marine and environmental scientists.

PROBABILISTIC METHODS IN GEOTECHNICAL ENGINEERING

PROCEEDINGS OF THE CONFERENCE, CANBERRA, 10-12 FEBRUARY 1993

CRC Press The proceedings of this conference contain keynote addresses on recent developments in geotechnical reliability and limit state design in geotechnics. It also contains invited lectures on such topics as modelling of soil variability, simulation of random fields and probability of rock joints. Contents: Keynote addresses on recent development on geotechnical reliability and limit state design in geotechnics, and invited lectures on modelling of soil variability, simulation of random field, probabilistic of rock joints, and probabilistic design of foundations and slopes. Other papers on analytical techniques in geotechnical reliability, modelling of soil properties, and probabilistic analysis of slopes, embankments and foundations.

CONSTRUCTION OF PRESTRESSED CONCRETE STRUCTURES

John Wiley & Sons Methods and practices for constructing sophisticated prestressed concrete structures. *Construction of Prestressed Concrete Structures, Second Edition*, provides the engineer or construction contractor with a complete guide to the design and construction of modern, high-quality concrete structures. This highly practicable new edition of Ben C. Gerwick's classic guide is expanded and almost entirely rewritten to reflect the dramatic developments in materials and techniques that have occurred over the past two decades. The first of the book's two sections deals with materials and techniques for prestressed concrete, including the latest recipes for high-strength and durable concrete mixes, new

reinforcing materials and their placement patterns, modern prestressing systems, and special techniques such as lightweight concrete and composite construction. The second section covers application to buildings; bridges; pilings; and marine structures, including offshore platforms, floating structures, tanks, and containments. Special subjects such as cracking and corrosion, repair and strengthening of existing structures, and construction in remote areas are presented in the final chapters. For engineers and construction contractors involved in any type of prestressed concrete construction, this book enables the effective implementation of advanced structural concepts and their economical and reliable translation into practice.

COASTAL GEOHAZARD AND OFFSHORE GEOTECHNICS

MDPI With rapid developments being made in the exploration of marine resources, coastal geohazard and offshore geotechnics have attracted a great deal of attention from coastal geotechnical engineers, with significant progress being made in recent years. Due to the complicated nature of marine environments, there are numerous natural marine geohazard present throughout the world's marine areas, e.g., the South China Sea. In addition, damage to offshore infrastructure (e.g., monopiles, bridge piers, etc.) and their supporting installations (pipelines, power transmission cables, etc.) has occurred in the last decades. A better understanding of the fundamental mechanisms and soil behavior of the seabed in marine environments will help engineers in the design and planning processes of coastal geotechnical engineering projects. The purpose of this book is to present the recent advances made in the field of coastal geohazards and offshore geotechnics. The book will provide researchers with information regarding the recent developments in the field, and possible future developments. The book is composed of eighteen papers, covering three main themes: (1) the mechanisms of fluid-seabed interactions and the instability associated with seabeds when they are under dynamic loading (papers 1-5); (2) evaluation of the stability of marine infrastructure, including pipelines (papers 6-8), piled foundation and bridge piers (papers 9-12), submarine tunnels (paper 13), and other supported foundations (paper 14); and (3) coastal geohazards, including submarine landslides and slope stability (papers 15-16) and other geohazard issues (papers 17-18). The editors hope that this book will function as a guide for researchers, scientists, and scholars, as well as practitioners of coastal and offshore engineering.

MODERN EARTHQUAKE ENGINEERING

OFFSHORE AND LAND-BASED STRUCTURES

Springer This book addresses applications of earthquake engineering for both offshore and land-based structures. It is self-contained as a reference work and covers a wide range of topics, including topics related to engineering seismology, geotechnical earthquake engineering, structural engineering, as well as special contents dedicated to design philosophy, determination of ground motions, shock waves, tsunamis, earthquake damage, seismic response of offshore and arctic

structures, spatial varied ground motions, simplified and advanced seismic analysis methods, sudden subsidence of offshore platforms, tank liquid impacts during earthquakes, seismic resistance of non-structural elements, and various types of mitigation measures, etc. The target readership includes professionals in offshore and civil engineering, officials and regulators, as well as researchers and students in this field.

RISK AND RELIABILITY IN GEOTECHNICAL ENGINEERING

CRC Press Establishes Geotechnical Reliability as Fundamentally Distinct from Structural Reliability Reliability-based design is relatively well established in structural design. Its use is less mature in geotechnical design, but there is a steady progression towards reliability-based design as seen in the inclusion of a new Annex D on "Reliability of Geotechnical Structures" in the third edition of ISO 2394. Reliability-based design can be viewed as a simplified form of risk-based design where different consequences of failure are implicitly covered by the adoption of different target reliability indices. Explicit risk management methodologies are required for large geotechnical systems where soil and loading conditions are too varied to be conveniently slotted into a few reliability classes (typically three) and an associated simple discrete tier of target reliability indices. Provides Realistic Practical Guidance Risk and Reliability in Geotechnical Engineering makes these reliability and risk methodologies more accessible to practitioners and researchers by presenting soil statistics which are necessary inputs, by explaining how calculations can be carried out using simple tools, and by presenting illustrative or actual examples showcasing the benefits and limitations of these methodologies. With contributions from a broad international group of authors, this text: Presents probabilistic models suited for soil parameters Provides easy-to-use Excel-based methods for reliability analysis Connects reliability analysis to design codes (including LRFD and Eurocode 7) Maximizes value of information using Bayesian updating Contains efficient reliability analysis methods Accessible To a Wide Audience Risk and Reliability in Geotechnical Engineering presents all the "need-to-know" information for a non-specialist to calculate and interpret the reliability index and risk of geotechnical structures in a realistic and robust way. It suits engineers, researchers, and students who are interested in the practical outcomes of reliability and risk analyses without going into the intricacies of the underlying mathematical theories.

HANDBOOK OF GEOTECHNICAL INVESTIGATION AND DESIGN TABLES

CRC Press This practical handbook of properties for soils and rock contains, in a concise tabular format, the key issues relevant to geotechnical investigations, assessments and designs in common practice. In addition, there are brief notes on the application of the tables. These data tables are compiled for experienced geotechnical professionals who require a reference document to access key information. There is an extensive database of correlations for different applications. The book should provide a useful bridge between soil and rock mechanics theory and its application to practical engineering solutions. The initial chapters deal with the planning of the geotechnical investigation, the classification of the soil and rock

properties and some of the more used testing is then covered. Later chapters show the reliability and correlations that are used to convert that data in the interpretative and assessment phase of the project. The final chapters apply some of these concepts to geotechnical design. This book is intended primarily for practicing geotechnical engineers working in investigation, assessment and design, but should provide a useful supplement for postgraduate courses.

CIVIL ENGINEERING FOR OFFSHORE WIND FARMS

ICE Publishing

TRANSPORTATION, WATER AND ENVIRONMENTAL GEOTECHNICS

PROCEEDINGS OF INDIAN GEOTECHNICAL CONFERENCE 2020 VOLUME 4

Springer Nature This book comprises select proceedings of the Indian Geotechnical Conference 2020 (IGC2020) focusing on emerging opportunities and challenges in the field of transportation geotechnics, scour and erosion, offshore geotechnics, and environmental geotechnology. The contents will be useful to researchers, educators, practitioners and policy makers alike.

INSTALLATION EFFECTS IN GEOTECHNICAL ENGINEERING

CRC Press Installation effects in geotechnical engineering contains the proceedings of the International Conference on Installation Effects in Geotechnical Engineering (Rotterdam, The Netherlands, 24-27 March 2013), the closing conference of GEO-INSTALL (FP7/2007-2013, PIAG-GA-2009-230638), an Industry-Academia Pathways and Partnerships project funded by the

GEOTECHNICAL ENGINEERING IN THE XXI CENTURY: LESSONS LEARNED AND FUTURE CHALLENGES

PROCEEDINGS OF THE XVI PAN-AMERICAN CONFERENCE ON SOIL MECHANICS AND GEOTECHNICAL ENGINEERING (XVI PCSMGE), 17-20 NOVEMBER 2019, CANCUN, MEXICO

IOS Press The first Pan-American Conference on Soil Mechanics and Geotechnical Engineering (PCSMGE) was held in Mexico in 1959. Every 4 years since then, PCSMGE has brought together the geotechnical engineering community from all over the world to discuss the problems, solutions and future challenges facing this engineering sector. Sixty years after the first conference, the 2019 edition returns to Mexico. This book, *Geotechnical Engineering in the XXI Century: Lessons learned and future challenges*, presents the proceedings of the XVI Pan-American Conference on Soil Mechanics and Geotechnical Engineering (XVI PCSMGE), held in Cancun, Mexico, from 17 - 20 November 2019. Of the 393 full papers submitted, 335 were accepted for publication after peer review. They are included here organized into 19 technical sessions, and cover a wide range of themes related to geotechnical engineering in the 21st century. Topics covered include: laboratory and in-situ testing; analytical

and physical modeling in geotechnics; numerical modeling in geotechnics; unsaturated soils; soft soils; foundations and retaining structures; excavations and tunnels; offshore geotechnics; transportation in geotechnics; natural hazards; embankments and tailings dams; soils dynamics and earthquake engineering; ground improvement; sustainability and geo-environment; preservation of historic sites; forensics engineering; rock mechanics; education; and energy geotechnics. Providing a state-of-the-art overview of research into innovative and challenging applications in the field, the book will be of interest to all those working in soil mechanics and geotechnical engineering. In this proceedings, 58% of the contributions are in English, and 42% of the contributions are in Spanish or Portuguese.

EARTHQUAKE GEOTECHNICAL ENGINEERING FOR PROTECTION AND DEVELOPMENT OF ENVIRONMENT AND CONSTRUCTIONS

PROCEEDINGS OF THE 7TH INTERNATIONAL CONFERENCE ON EARTHQUAKE GEOTECHNICAL ENGINEERING, (ICEGE 2019), JUNE 17-20, 2019, ROME, ITALY

CRC Press Earthquake Geotechnical Engineering for Protection and Development of Environment and Constructions contains invited, keynote and theme lectures and regular papers presented at the 7th International Conference on Earthquake Geotechnical Engineering (Rome, Italy, 17-20 June 2019. The contributions deal with recent developments and advancements as well as case histories, field monitoring, experimental characterization, physical and analytical modelling, and applications related to the variety of environmental phenomena induced by earthquakes in soils and their effects on engineered systems interacting with them. The book is divided in the sections below: Invited papers Keynote papers Theme lectures Special Session on Large Scale Testing Special Session on Liquefact Projects Special Session on Lessons learned from recent earthquakes Special Session on the Central Italy earthquake Regular papers Earthquake Geotechnical Engineering for Protection and Development of Environment and Constructions provides a significant up-to-date collection of recent experiences and developments, and aims at engineers, geologists and seismologists, consultants, public and private contractors, local national and international authorities, and to all those involved in research and practice related to Earthquake Geotechnical Engineering.

OFFSHORE TECHNOLOGY, GEOTECHNICAL ENGINEERING, OCEAN ENERGY TECHNOLOGY

NUMERICAL METHODS IN GEOTECHNICAL ENGINEERING IX

PROCEEDINGS OF THE 9TH EUROPEAN CONFERENCE ON NUMERICAL METHODS IN GEOTECHNICAL ENGINEERING (NUMGE 2018), JUNE 25-27, 2018, PORTO, PORTUGAL

CRC Press NUMGE 2018 is the ninth in a series of conferences on Numerical Methods

in Geotechnical Engineering organized by the ERTC7 under the auspices of the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE). The first conference was held in 1986 in Stuttgart, Germany and the series continued every four years (1990 Santander, Spain; 1994 Manchester, United Kingdom; 1998 Udine, Italy; 2002 Paris, France; 2006 Graz, Austria; 2010 Trondheim, Norway; 2014 Delft, The Netherlands). The conference provides a forum for exchange of ideas and discussion on topics related to numerical modelling in geotechnical engineering. Both senior and young researchers, as well as scientists and engineers from Europe and overseas, are invited to attend this conference to share and exchange their knowledge and experiences.

DYNAMICS OF OFFSHORE STRUCTURES

John Wiley & Sons Unique, cutting-edge material on structural dynamics and natural forces for offshore structures Using the latest advances in theory and practice, *Dynamics of Offshore Structures, Second Edition* is extensively revised to cover all aspects of the physical forces, structural modeling, and mathematical methods necessary to effectively analyze the dynamic behavior of offshore structures. Both closed-form solutions and the Mathematica(r) software package are used in many of the up-to-date example problems to compute the deterministic and stochastic structural responses for such offshore structures as buoys; moored ships; and fixed-bottom, cable-stayed, and gravity-type platforms. Throughout the book, consideration is given to the many assumptions involved in formulating a structural model and to the natural forces encountered in the offshore environment. These analyses focus on plane motions of elastic structures with linear and nonlinear restraints, as well as motions induced by the forces of currents, winds, earthquakes, and waves, including the latest theories and information on wave mechanics. Topics addressed include multidegree of freedom linear structures, continuous system analysis (including the motion of cables and pipelines), submerged pile design, structural modal damping, fluid-structure-soil interactions, and single degree of freedom structural models that, together with plane wave loading theories, lead to deterministic or time history predictions of structural responses. These analyses are extended to statistical descriptions of both wave loading and structural motion. *Dynamics of Offshore Structures, Second Edition* is a valuable text for students in civil and mechanical engineering programs and an indispensable resource for structural, geotechnical, and construction engineers working with offshore projects.

FRONTIERS IN OFFSHORE GEOTECHNICS

PROCEEDINGS OF THE INTERNATIONAL SYMPOSIUM ON FRONTIERS IN OFFSHORE GEOTECHNICS (IS-FOG 2005), 19-21 SEPT 2005, PERTH, WA, AUSTRALIA

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wind turbines, site investigation, geoh

NUMERICAL METHODS IN GEOTECHNICAL ENGINEERING

CRC Press Numerical Methods in Geotechnical Engineering contains the proceedings of the 8th European Conference on Numerical Methods in Geotechnical Engineering (NUMGE 2014, Delft, The Netherlands, 18-20 June 2014). It is the eighth in a series of conferences organised by the European Regional Technical Committee ERTC7 under the auspices of the International

GEOTECHNICAL ENGINEERING

ADVANCES IN SOIL MECHANICS AND FOUNDATION ENGINEERING

BoD - Books on Demand This book discusses contemporary issues related to soil mechanics and foundation engineering in earthworks, which are critical components in construction projects and often require detailed management techniques and unique solutions to address failures and implement remedial measures. The geotechnical engineering community continues to improve the classical testing techniques for measuring critical properties of soils and rocks, including stress wave-based non-destructive testing methods as well as methods used to improve shallow and deep foundation design. To minimize failure during construction, contemporary issues and related data may reveal useful lessons to improve project management and minimize economic losses. This book focuses on these aspects using appropriate methods in a rather simple manner. It also touches upon many interesting topics in soil mechanics and modern geotechnical engineering practice such as geotechnical earthquake engineering, principals in foundation design, slope stability analysis, modeling in geomechanics, offshore geotechnics, and geotechnical engineering perspective in the preservation of historical buildings and archeological sites. A total of seven chapters are included in the book.

SOIL MECHANICS

Springer This book is intended primarily to serve the needs of the undergraduate civil engineering student and aims at the clear explanation, in adequate depth, of the fundamental principles of soil mechanics. The understanding of these principles is considered to be an essential foundation upon which future practical experience in soils engineering can be built. The choice of material involves an element of personal opinion but the contents of this book should cover the requirements of most undergraduate courses to honours level. It is assumed that the student has no prior knowledge of the subject but has a good understanding of basic mechanics. The book includes a comprehensive range of worked examples and problems set for solution by the student to consolidate understanding of the fundamental principles and illustrate their application in simple practical situations. The International System of Units is used throughout the book. A list of references is included at the end of each chapter as an aid to the more advanced study of any particular topic. It is intended also that the book will serve as a useful source of reference for the practising engineer. In the third edition no changes have been made to the aims of

the book. Except for the order of two chapters being interchanged and for minor changes in the order of material in the chapter on consolidation theory, the basic structure of the book is unaltered.

OFFSHORE GEOTECHNICAL ENGINEERING

CRC Press Design practice in offshore geotechnical engineering has grown out of onshore practice, but the two application areas have tended to diverge over the last thirty years, driven partly by the scale of the foundation and anchoring elements used offshore, and partly by fundamental differences in construction and installation techniques. As a consequence offshore geotechnical engineering has grown as a speciality. The structure of *Offshore Geotechnical Engineering* follows a pattern that mimics the flow of a typical offshore project. In the early chapters it provides a brief overview of the marine environment, offshore site investigation techniques and interpretation of soil behaviour. It proceeds to cover geotechnical design of piled foundations, shallow foundations and anchoring systems. Three topics are then covered which require a more multi-disciplinary approach: the design of mobile drilling rigs, pipelines and geohazards. This book serves as a framework for undergraduate and postgraduate courses, and will appeal to professional engineers specialising in the offshore industry.

GEOTECHNICAL ENGINEERING STATE OF THE ART AND PRACTICE

KEYNOTE LECTURES FROM GEOCONGRESS 2012

Amer Society of Civil Engineers "Sponsored by the Geo-Institute of the American Society of Civil Engineers."

INTRODUCTION TO PERMANENT PLUG AND ABANDONMENT OF WELLS

Springer Nature This open access book offers a timely guide to challenges and current practices to permanently plug and abandon hydrocarbon wells. With a focus on offshore North Sea, it analyzes the process of plug and abandonment of hydrocarbon wells through the establishment of permanent well barriers. It provides the reader with extensive knowledge on the type of barriers, their functioning and verification. It then discusses plug and abandonment methodologies, analyzing different types of permanent plugging materials. Last, it describes some tests for verifying the integrity and functionality of installed permanent barriers. The book offers a comprehensive reference guide to well plugging and abandonment (P & A) and well integrity testing. The book also presents new technologies that have been proposed to be used in plugging and abandoning of wells, which might be game-changing technologies, but they are still in laboratory or testing level. Given its scope, it addresses students and researchers in both academia and industry. It also provides information for engineers who work in petroleum industry and should be familiarized with P & A of hydrocarbon wells to reduce the time of P & A by considering it during well planning and construction.