

Geotechnical Engineers Portable Handbook

A complete, up-to-date guide for forensic engineers Fully revised and packed with current case studies, Forensic Geotechnical and Foundation Engineering, Second Edition provides a step-by-step approach to conducting a professional forensic geotechnical and foundation investigation. This authoritative resource explains how to: Investigate damage, deterioration, and collapse in a structure Determine what caused the damage Develop repair recommendations Diagnose cracks Prepare files and reports Avoid civil liability Helpful charts and photographs aid in your understanding of the material covered. With expert advice on all aspects of the process--from accepting the assignment to delivering compelling testimony--this is a practical, all-in-one guide to geotechnical and foundation investigations in forensic engineering. Explains how to investigate damage due to: Settlement of structures * Expansive soil * Lateral Movement * Earthquakes * Erosion * Deterioration * Bearing Capacity Failures * Shrinkage Cracking of Concrete Foundations * Timber Decay * Soluble Soil * Groundwater and Moisture Problems * And Other Causes DIVLogical, analytical approach to solution of groundwater and seepage problems. Coverage of Russian work, advanced engineering mathematics, numerous worked-out examples, over 200 problems. /div

Portable ventilation systems provide an option for supplementing installed ventilation, as well as providing a system for ventilation where none exists. Portable Ventilation Systems Handbook discusses the various types of portable ventilation systems currently in use, their advantages and disadvantages, and what systems works best for what function.

This text provides a unique, practical and comprehensive 'how to' introduction to plastic-to-plastic, non-permanent assemblies. Covering a full range of information in an easy to understand, nontechnical format, this outstanding work affords the confident understanding needed to keep pace with advances in plastic technology.

Publisher Description

This Handbook is a state-of-the-field volume containing diverse approaches to sensory experience, bringing to life in an innovative, remarkably vivid, and visceral way the lives of past humans through contributions that cover the chronological and geographical expanse of the ancient Near East. It comprises thirty-two chapters written by leading international contributors that look at the ways in which humans, through their senses, experienced their lives and the world around them in the ancient Near East, with coverage of Anatolia, Egypt, the Levant, Mesopotamia, Syria, and Persia, from the Neolithic through the Roman period. It is organised into six parts related to sensory contexts: Practice, production, and taskscape; Dress and the body; Ritualised practice and ceremonial spaces; Death and burial; Science, medicine, and aesthetics; and Languages and semantic fields. In addition to exploring what makes each sensory context unique, this organisation facilitates cross-cultural and cross-chronological, as well as cross-sensory and multisensory comparisons and discussions of sensory experiences in the ancient world. In so doing, the volume also enables considerations of senses beyond the five-sense model of Western philosophy (sight, hearing, touch, taste, and smell), including proprioception and interoception, and the phenomena of synaesthesia and kinaesthesia. The Routledge Handbook of the Senses in the Ancient Near East provides scholars and students within the field of ancient Near Eastern studies new perspectives on and conceptions of familiar spaces, places, and practices, as well as material culture and texts. It also allows scholars and students from adjacent fields such as Classics and Biblical Studies to engage with this material, and is a must-read for any scholar or student interested in or already engaged with the field of sensory studies in any period.

This book is a concise, portable handbook that focuses on the clinical use of mechanical blood pumps. All aspects of mechanical circulatory support are addressed, including patient selection, preoperative preparation, operative management, anesthetic considerations and conduct of cardiopulmonary bypass, postop management including complications associated with blood pump use and long-term care and rehabilitation.

One-volume library of instant geotechnical and foundation data Now for the first time ever, geotechnical, foundation, and civil engineers...geologists...architects, planners, and construction managers can quickly find information they must refer to every working day, in one compact source. Edited by Robert W. Day, the time -and effort-saving Geotechnical Engineer's Portable Handbook gives you field exploration guidelines and lab procedures. You'll find soil and rock classification, basic phase relationships, and all the tables and charts you need for stress distribution, pavement, and pipeline design. You also get abundant information on all types of geotechnical analyses, including settlement, bearing capacity, expansive soil, slope stability - plus coverage of retaining walls and building foundations. Other construction-related topics covered include grading, instrumentation, excavation, underpinning, groundwater control and more. Intended as an introductory text in soil mechanics, the eighth edition of Das, PRINCIPLES OF GEOTECHNICAL ENGINEERING offers an overview of soil properties and mechanics together with coverage of field practices and basic engineering procedure. Background information needed to support study in later design-oriented courses or in professional practice is provided through a wealth of comprehensive discussions, detailed explanations, and more figures and worked out problems than any other text in the market. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

FUNDAMENTALS OF GEOTECHNICAL ENGINEERING, 5E offers a powerful combination of essential components from Braja Das' market-leading books: PRINCIPLES OF GEOTECHNICAL ENGINEERING and PRINCIPLES OF FOUNDATION ENGINEERING in one cohesive book. This unique, concise geotechnical engineering book focuses on the fundamental concepts of both soil mechanics and foundation engineering without the distraction of excessive details or cumbersome alternatives. A wealth of worked-out, step-by-step examples and valuable figures help readers master key concepts and strengthen essential problem solving skills. Prestigious authors Das and Sivakugan maintain the careful balance of today's most current research and practical field applications in a proven approach that has made Das' books leaders in the field. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

As a cultivated form of invention, product design is a deeply human phenomenon that enables us to shape, modify and alter the world around us – for better or worse. The recent emergence of the sustainability imperative in product design compels us to recalibrate the parameters of good design in an unsustainable age. Written by designers, for designers, the Routledge

Handbook of Sustainable Product Design presents the first systematic overview of the burgeoning field of sustainable product design. Brimming with intelligent viewpoints, critical propositions, practical examples and rich theoretical analyses, this book provides an essential point of reference for scholars and practitioners at the intersection of product design and sustainability. The book takes readers to the depth of our engagements with the designed world to advance the social and ecological purpose of product design as a critical twenty-first-century practice.

Comprising 35 chapters across 6 thematic parts, the book's contributors include the most significant international thinkers in this dynamic and evolving field.

The Geotechnical Engineering Handbook brings together essential information related to the evaluation of engineering properties of soils, design of foundations such as spread footings, mat foundations, piles, and drilled shafts, and fundamental principles of analyzing the stability of slopes and embankments, retaining walls, and other earth-retaining structures. The Handbook also covers soil dynamics and foundation vibration to analyze the behavior of foundations subjected to cyclic vertical, sliding and rocking excitations and topics addressed in some detail include: environmental geotechnology and foundations for railroad beds.

Filled with handy tables; charts; diagrams; and formulas; this reader-friendly guide gives authoritative solutions and simplifies each step of every process; from selecting appropriate methods to analyzing your results. --

"The proposed book focuses on the principles and design of ground improvement technologies"--

Robert Day has invented a new form, the Chance Encounters of a Literary Kind memoirs?brief, whimsical, sometimes touching, reminiscences about his brushes (often friendships) with literary greatness. He treats Shakespeare, William Stafford, Mavis Gallant, John Barth, Ray Carver, Walter Bernstein, and Michael de Montaigne. Some he met and knew in person; others he met in his mind. But the collision is sparkling in its reverent irreverence, airy, gossamer-thin, a playful and informal jeu d'esprit that takes itself not very seriously, yet with flashes of seriousness and wit.

Freshly updated and extended version of Slope Analysis (Chowdhury, Elsevier, 1978). This reference book gives a complete overview of the developments in slope engineering in the last 30 years. Its multi-disciplinary, critical approach and the chapters devoted to seismic effects and probabilistic approaches and reliability analyses, reflect the distinctive style of the original.

Subjects discussed are: the understanding of slope performance, mechanisms of instability, requirements for modeling and analysis, and new techniques for observation and modeling.

Special attention is paid to the relation with the increasing frequency and consequences of natural and man-made hazards. Strategies and methods for assessing landslide susceptibility, hazard and risk are also explored. Moreover, the relevance of geotechnical analysis of slopes in the context of climate change scenarios is discussed. All theory is supported by numerous examples.

"...A wonderful book on Slope Stability....recommended as a reference book to those who are associated with the geotechnical engineering profession (undergraduates, post graduates and consulting engineers)..." Prof. Devendra Narain Singh, Indian Inst. of Technology, Mumbai, India "I have yet to see a book that excels the range and depth of Geotechnical Slope Analysis... I have failed to find a topic which is not covered and that makes the book almost a single window outlet for the whole range of readership from students to experts and from theoreticians to practicing engineers..." Prof. R.K. Bhandari, New Delhi, India

Building Surveyor's Pocket Book is an accessible encyclopaedia of matters vital to building surveyors. Well-illustrated with diagrams, pictures, tables, and graphs, it covers all essential elements of building pathology, building performance, and building construction terminology in a simple, accessible way for the practitioner and student. This Pocket Book provides a practical and portable reference text, working as a first-stop publication for those wishing to refresh their knowledge or in need of guidance on surveying practice. Working through fundamental principles in key practice areas, the book is not overly bound by the regulation and legislation of one region, and the principles can be applied internationally. This book is ideal reading for individual surveyors, practitioners, and students in building surveying, facilities management, refurbishment, maintenance, renovation, and services management. It is also of use for those interested in building forensics, building performance, pathology, and anyone studying for their RICS APC. Many other professions in architecture, contracting, engineering, and safety will also find the book of use when undertaking similar practice.

A one-man publishing firm and a designer of abecedarians, agendas, address books and "blanks," this story's narrator threads together his most complicated design yet: the story of his own past. Living in The Country Club Plaza, the "Mr. Tabula Rasa" of Kansas City tries to make sense of his life through Wednesday Wives, Chekhov, the dictionary and fabricated religion. The story weaves through his college memories, written in fleeting, Didion-esque vignettes: Berkeley. The '60s. Two boys howling Ginsberg in the campus library. Riots. The bourgeois of academia and pretend-doctors. A lab where dogs are bled dry for the "betterment of humanity." Hazen: his close friend and classmate, a man privy to quick wit and easy women. Beth: a waitress, painter and unrequited love. And Austen: the black Healy that welds the three together. Teeming with reminisces of the ugly and beautiful, of youthful misunderstandings and secret longings, Robert Day offers us a man's life as glossy, possible, and vast as a blank book.

The Routledge Handbook of Material Culture in Early Modern Europe marks the arrival of early modern material culture studies as a vibrant, fully-established field of multi-disciplinary research. The volume provides a rounded, accessible collection of work on the nature and significance of materiality in early modern Europe – a term that embraces a vast range of objects as well as addressing a wide variety of human interactions with their physical environments. This stimulating view of materiality is distinctive in asking questions about the whole material world as a context for lived experience, and the book considers material interactions at all social levels. There are 27 chapters by leading experts as well as 13 feature object studies to highlight specific items that have survived from this period (defined broadly as c.1500–c.1800). These contributions explore the things people acquired, owned, treasured, displayed and discarded, the spaces in which people used and thought about things, the social relationships which cluster around goods – between producers, vendors and consumers of various kinds – and the way knowledge travels around those circuits of connection. The content also engages with wider issues such as the relationship between public and private life, the changing connections between the sacred and the profane, or the effects of gender and social status upon

lived experience. Constructed as an accessible, wide-ranging guide to research practice, the book describes and represents the methods which have been developed within various disciplines for analysing pre-modern material culture. It comprises four sections which open up the approaches of various disciplines to non-specialists: 'Definitions, disciplines, new directions', 'Contexts and categories', 'Object studies' and 'Material culture in action'. This volume addresses the need for sustained, coherent comment on the state, breadth and potential of this lively new field, including the work of historians, art historians, museum curators, archaeologists, social scientists and literary scholars. It consolidates and communicates recent developments and considers how we might take forward a multi-disciplinary research agenda for the study of material culture in periods before the mass production of goods.

Appropriate for courses in Structural Dynamics, Earthquake Engineering or Seismology. This is the first book on the market focusing specifically on the topic of geotechnical earthquake engineering. Also covers fundamental concepts in seismology, geotechnical engineering, and structural engineering.

In this edited volume on advances in forensic geotechnical engineering, a number of technical contributions by experts and professionals in this area are included. The work is the outcome of deliberations at various conferences in the area conducted by Prof. G.L. Sivakumar Babu and Dr. V.V.S. Rao as secretary and Chairman of Technical Committee on Forensic Geotechnical Engineering of International Society for Soil Mechanics and Foundation Engineering (ISSMGE). This volume contains papers on topics such as guidelines, evidence/data collection, distress characterization, use of diagnostic tests (laboratory and field tests), back analysis, failure hypothesis formulation, role of instrumentation and sensor-based technologies, risk analysis, technical shortcomings. This volume will prove useful to researchers and practitioners alike.

A fully up-to-date, practical guide to foundation engineering Revised to cover the 2009 International Building Code, Foundation Engineering Handbook, Second Edition presents basic geotechnical field and laboratory studies, such as subsurface exploration and laboratory testing of soil, rock, and groundwater samples. The book then discusses the geotechnical aspects of foundation engineering, including conditions commonly encountered by design engineers--settlement, expansive soil, and slope stability. Details on the performance or engineering evaluation of foundation construction and the application of the 2009 International Building Code are included in this valuable resource.

FOUNDATION ENGINEERING HANDBOOK, SECOND EDITION COVERS: Subsurface exploration Laboratory testing Soil mechanics Shallow and deep foundations Bearing capacity and settlement of foundations Foundations on expansive soil Slope stability Retaining walls Foundation deterioration and cracking Geotechnical earthquake engineering for soils, foundations, and retaining walls Grading and other soil improvement methods Foundation excavation, underpinning, and field load tests Geosynthetics and instrumentation 2009 International Building Code regulations for soils and foundations

The first book on the subject written by a practitioner for practitioners. Geotechnical Instrumentation for Monitoring Field Performance Geotechnical Instrumentation for Monitoring Field Performance goes far beyond a mere summary of the technical literature and manufacturers' brochures: it guides reader through the entire geotechnical instrumentation process, showing them when to monitor safety and performance, and how to do it well. This comprehensive guide: * Describes the critical steps of planning monitoring programs using geotechnical instrumentation, including what benefits can be achieved and how construction specifications should be written * Describes and evaluates monitoring methods and recommends instruments for monitoring groundwater pressure, deformations, total stress in soil, stress change in rock, temperature, and load and strain in structural members * Offers detailed practical guidelines on instrument calibrations, installation and maintenance, and on the collection, processing, and interpretation of instrumentation data * Describes the role of geotechnical instrumentation during the construction and operation phases of civil engineering projects, including braced excavations, embankments on soft ground, embankment dams, excavated and natural slopes, underground excavations, driving piles, and drilled shafts * Provides guidelines throughout the book on the best practices

Instant access to the latest geotechnical engineering data Fully updated to include the 2012 International Building Code (IBC), Geotechnical Engineer's Portable Handbook, Second Edition, features a wealth of on-the-job geotechnical and construction related information in a convenient, quick-reference format. This practical resource is filled with essential data, formulas, and guidelines you can access right away. Detailed tables, charts, graphs, and illustrations are included throughout the book for ease of use in the field. Coverage includes: Field exploration Laboratory testing Soil and rock classification Phase relationships Effective stress and stress distribution Shear strength Permeability and seepage Settlement analyses Bearing capacity analyses Pavement and pipeline design Expansive soil Slope stability Geotechnical earthquake engineering Erosion analyses Retaining walls Deterioration Foundations Grading and other site improvement methods Groundwater and percolation tests Excavation, underpinning, and field load tests Geosynthetics Instrumentation International Building Code regulations for soils International Building Code regulations for foundations

Effectively Calculate the Pressures of Soil When it comes to designing and constructing retaining structures that are safe and durable, understanding the interaction between soil and structure is at the foundation of it all. Laying down the groundwork for the non-specialists looking to gain an understanding of the background and issues surrounding geotechnical engineering, Earth Pressure and Earth-Retaining Structures, Third Edition introduces the mechanisms of earth pressure, and explains the design requirements for retaining structures. This text makes clear the uncertainty of parameter and partial factor issues that underpin recent codes. It then goes on to explain the principles of the geotechnical design of gravity walls, embedded walls, and composite structures. What's New in the Third Edition: The first half of the book brings together and describes possible interactions between the ground and a retaining wall. It also includes materials that factor in available software packages dealing with seepage and slope instability,

therefore providing a greater understanding of design issues and allowing readers to readily check computer output. The second part of the book begins by describing the background of Eurocode 7, and ends with detailed information about gravity walls, embedded walls, and composite walls. It also includes recent material on propped and braced excavations as well as work on soil nailing, anchored walls, and cofferdams. Previous chapters on the development of earth pressure theory and on graphical techniques have been moved to an appendix. Earth Pressure and Earth-Retaining Structures, Third Edition is written for practicing geotechnical, civil, and structural engineers and forms a reference for engineering geologists, geotechnical researchers, and undergraduate civil engineering students.

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.

Designed to complement the McGraw-Hill Civil Engineering PE Exam Guide: Breadth and Depth, this subject specific "depth" guide provides comprehensive coverage of the subject matter applicants will face in the afternoon portion of the PE exam. Each book, authored by an expert in the field, will feature example problems along with power study techniques for peak performance.

"How much does it weigh?" seems a simple question. To scientists and engineers, however, the answer is far from simple, and determining the answer demands consideration of an almost overwhelming number of factors. With an intriguing blend of history, fundamentals, and technical details, the Handbook of Mass Measurement sets forth the details

More than ten years have passed since the first edition was published. During that period there have been a substantial number of changes in geotechnical engineering, especially in the applications of foundation engineering. As the world population increases, more land is needed and many soil deposits previously deemed unsuitable for residential housing or other construction projects are now being used. Such areas include problematic soil regions, mining subsidence areas, and sanitary landfills. To overcome the problems associated with these natural or man-made soil deposits, new and improved methods of analysis, design, and implementation are needed in foundation construction. As society develops and living standards rise, tall buildings, transportation facilities, and industrial complexes are increasingly being built. Because of the heavy design loads and the complicated environments, the traditional design concepts, construction materials, methods, and equipment also need improvement. Further, recent energy and material shortages have caused additional burdens on the engineering profession and brought about the need to seek alternative or cost-saving methods for foundation design and construction.

Geotechnical Engineers Portable Handbook, Second Edition McGraw Hill Professional

"Intended for use in the first of a two course sequence in geotechnical engineering usually taught to third- and fourth-year undergraduate civil engineering students. An Introduction to Geotechnical Engineering offers a descriptive, elementary introduction to geotechnical engineering with applications to civil engineering practice."--Publisher's website.

Psychological resilience has emerged as a highly significant area of research and practice in recent years, finding applications with a broad range of different groups in many settings. Contemporary discourse is not limited to ways of effective coping with adversity but also introduces mechanisms that can lead to enhanced capacity after dealing with difficult circumstances and recognises the importance of enriching the field with varied perspectives. The Routledge International Handbook of Psychosocial Resilience is a comprehensive compendium of writings of international contributors that takes stock of the state-of-the-art in resilience theory, research and practice. The Routledge International Handbook of Psychosocial Resilience covers the many different trajectories that resilience research has taken in four parts. Part One delineates the 'Conceptual Arena' by providing an overview of the current state of theory and research, exploring biological, psychological, and socio-ecological perspectives and discussing various theoretical models of personal and social resilience. The 'Psychosocial Correlates' of resilience are discussed further in Part Two, from personal and personality correlates, socio-environmental factors and the contextual and cultural conditions conducive to resilient behaviour. In Part Three, 'Applied Evidences' are introduced in order to build upon the theoretical foundations in the form of several case studies drawn from varied contexts. Examples of resilient behaviour range from post-disaster scenarios to special operation groups, orphaned children, and violent extremism. Finally, Part Four, 'Proposed Implications and Resilience Building', sums up the issues involved in discussing post-traumatic growth, wellbeing and positive adaptation in the varied contexts of personal, familial, organizational and societal resilience. The volume provides a comprehensive overview of resilience theory, practice and research across disciplines and cultures, from varied perspectives and different populations. It will be a key reference for psychiatrists, psychologists, psychotherapists and psychiatric social workers in practice and in training as well as researchers and students of psychology, sociology, human development, family studies and disaster management.

Designed to give engineers a crash course in all aspects of modern geotechnical and foundation engineering Takes readers step-by-step through the typical process of a design project--from proposal-writing to the final preparation of the "as built" report Includes numerous visual aids: photographs, charts, tables, and more than 350 illustrations

Geotechnical Engineering of Dams, 2nd edition provides a comprehensive text on the geotechnical and geological aspects of the investigations for and the design and construction of new dams and the review and assessment of existing dams. The main emphasis of this work is on embankment dams, but much of the text, particularly those parts related to g

This new handbook covers a wide range of engineering skills generally not taught in today's college-level technical programs. New engineers, though technically sound, need to master these other skills upon entering the professional world. Topics covered include teaming, root cause analysis, Lean manufacturing and management, presentation skills, innovation, and change leadership. Based on the author's 30 years of engineering and leadership experience, this work contains a wealth of practical tips and advice, as well as lessons learned the hard way. Portable and concise, the handbook can help new engineers thrive in and enjoy the technical world and their professional careers.

