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Screen Design Manual - Frank Thissen 2004
The Screen Design Manual provides designers of interactive media with a practical working guide for preparing and presenting information that is suitable for both their target groups and the media they are using. It highlights background information and relationships, clarifying them with examples, and encourages the further development of the language of digital media. In addition to the basics of perception and learning psychology, ergonomics, communication theory, imagery research, and aesthetics, the book also considers design navigation and orientation elements. Guidelines and checklists, along with the comprehensive design of the book, support the transfer of information into practice. Frank Thissen teaches multimedia didactics and information design at the University of Applied Sciences in Stuttgart. For over 10 years he has been developing computer based training. He has worked for international companies such as Siemens AG and SAP AG. His research project explores the role of emotion in e-learning > www.frank-thissen.de Key Topics: - Interactive media - Text for the screen - Effective use of pictures - Video, animation, and sound - Screen layout - Orientation and navigation - Interaction - Emotions and metamessages - Intercultural communication
Plasticity and Geomechanics - R. O. Davis 2005-08-22
Plasticity theory is widely used to describe the behaviour of soil and rock in many engineering situations. Plasticity and Geomechanics presents a concise introduction to the general subject of plasticity with a particular emphasis on applications in geomechanics. Derived from the authors' own lecture notes, this book is written with students firmly in mind. Excessive use of mathematical methods is avoided in the main body of the text and, where possible, physical interpretations are given for important concepts. In this way the authors present a clear introduction to the complex ideas and concepts of plasticity as well as demonstrating how this developing subject is of critical importance to geomechanics and geotechnical engineering. This book therefore complements Elasticity and Geomechanics by the same authors and will appeal to graduate students and researchers in the fields of soil mechanics, foundation engineering, and geomechanics.
Hydraulic Fracture Modeling - Yu-Shu Wu 2017-12-12
Hydraulic Fracture Modeling delivers all the pertinent technology and solutions in one product to become the go-to source for petroleum and reservoir engineers. Providing tools and approaches, this multi-contributed reference presents current and upcoming developments for modeling rock fracturing including their limitations and problem-solving applications. Fractures are common in oil and gas reservoir formations, and with the ongoing increase in development of unconventional reservoirs, more petroleum engineers today need to know the latest technology surrounding hydraulic fracturing technology such as fracture rock modeling. There is tremendous research in the area but not all located in one place. Covering two types of modeling technologies, various effective fracturing approaches and model applications for fracturing, the book equips today’s petroleum engineer with an all-inclusive product to characterize and optimize today’s more complex reservoirs. Offers understanding of the details surrounding fracturing and fracture modeling technology, including theories and quantitative methods Provides academic and practical perspective from multiple contributors at the forefront of hydraulic fracturing and rock mechanics Provides today’s petroleum engineer with model validation tools backed by real-world case studies
Writing Interactive Music for Video Games - Michael Sweet 2015
This is the first complete guide to composing interactive scores for video games. Authored by the developer of Berklee College of Music's pioneering Game Audio program, it covers everything professional composers and music students need to know, and contains exclusive tools for interactive scoring previously available only at Berklee. Drawing on his experience as an award-winning video game composer and in teaching hundreds of music students, the author brings together comprehensive knowledge presented in no other book.
Web Audio API - Boris Smus 2013
Go beyond HTML5's Audio tag and boost the audio capabilities of your web application with the Web Audio API. Packed with lots of code examples, crisp descriptions, and useful illustrations, this concise guide shows you how to use this JavaScript API to make the sounds and music of your games and interactive applications come alive. You need little or no digital audio expertise to get started. Author Boris Smus introduces you to digital audio concepts, then shows you how the Web Audio API solves specific application audio problems. If you're an experienced JavaScript programmer, you'll not only learn how to synthesize and process digital audio, you'll also explore audio analysis and visualization with this API. Learn Web Audio API, including audio graphs and the audio nodes Provide quick feedback to user actions by scheduling sounds with the API's precise timing model Control gain, volume, and loudness, and dive into clipping and crossfading Understand pitch and frequency: use tools to manipulate soundforms directly with JavaScript Generate synthetic sound effects and learn how to spatialize sound in 3D space Use Web Audio API with the Audio tag, getUserMedia, and the Page Visibility API
Mastering OpenCV 4 - Roy Shilkrot 2018-12-27
Work on practical computer vision projects covering advanced object detector techniques and modern deep learning and machine learning algorithms Key FeaturesLearn about the new features that help unlock the full potential of OpenCV 4Build face detection applications with a cascade classifier using face landmarksCreate an optical character recognition (OCR) model using deep learning and convolutional neural networksBook Description Mastering OpenCV, now in its third edition, targets computer vision engineers taking their first steps toward mastering OpenCV. Keeping the mathematical formulations to a solid but bare minimum, the book delivers complete projects from ideation to running code, targeting current hot topics in computer vision such as face recognition, landmark detection and pose estimation, and number recognition with deep convolutional networks. You’ll learn from experienced OpenCV experts how to implement computer vision products and projects both in academia and industry in a comfortable package. You’ll get acquainted with API functionality and gain insights into design choices in a complete computer vision project. You’ll also go beyond the basics of computer vision to implement solutions for complex image processing projects. By the end of the book, you will have created various working prototypes with the help of projects in the book and be well versed with the new features of OpenCV4. What you will learnBuild real-world computer vision problems with working OpenCV code samplesUncover best practices in engineering and maintaining OpenCV projectsExplore algorithmic design approaches for complex computer vision tasksWork with OpenCV’s most updated API (v4.0.0) through projectsUnderstand 3D scene reconstruction and Structure from Motion (SfM)Study camera calibration and overlay AR using the ArUco ModuleWho this book is for This book is for those who have a basic knowledge of OpenCV and are competent C++ programmers. You need to have an understanding of some of the more theoretical/mathematical concepts, as we move quite quickly throughout the book.
The Journal and Messenger - 1918

Geotechnical Engineering Education and Training - I Antonescu 2020-09-10
This volume contains papers and reports from the Conference held in Romania, June 2000. The book covers many topics, for example, place, role and content of geotechnical engineering in civil, environmental and earthquake engineering.
HTML5 and CSS3 Masterclass - Robin Nixon 2022-09-14
Everything You Need to Know to be a Master Web Developer KEY FEATURES ● A step-by-step guide for web developers to plan, sketch, design, create, test, and launch their web applications. ● Extensive

illustrations, examples, and best practices to help you become a proficient and modern HTML and CSS developer. ● Includes simple language, short and succinct chapters, and many models to teach you every element of HTML5 and CSS3. DESCRIPTION HTML5 and CSS3 Masterclass is an all-inclusive book that teaches and transforms you into a self-reliant web developer capable of creating your websites as soon as you finish reading the book. Every topic in this book is presented sequentially with ready-made, working examples and numerous figures explaining what a professional must understand. This book is written in a casual, easy-to-digest style with plenty of observations and ideas to help you make the most of the current web developer tools. This book will help you master each new ability before moving on to the next by going through the examples in this book. As you proceed, this book will help you develop more explicit knowledge of the types of capabilities made accessible to you by the advanced new technologies added to HTML and CSS. At the beginning of each chapter, you are informed of the central concepts to be covered and given a goal for the information and abilities you should have acquired by the chapter's conclusion. With the knowledge you get and the superior understanding you attain, this book is an excellent way to improve your competitiveness as a web developer and boost your professional growth. WHAT YOU WILL LEARN ● In-depth web design training with Geolocation, the HTML5 Canvas, 2D and 3D CSS transformations, Flexbox, CSS Grid, and more. ● Understanding HTML5 and CSS3's features, capabilities, and usage methods from A to Z. ● Knowledge of the HTML5 Canvas, 2D and 3D CSS Transformations, Flexbox, and CSS Grid. ● Use established web components and layout patterns to create design schemas that look professional. ● Power up your websites and apps with geo-location, mapping, form handling, 3D animations, and audio-video effects. ● Learn to use Responsive Web Design to improve smartphone, tablet, and laptop user experience. WHO THIS BOOK IS FOR If you want to become an expert web developer, this is an appropriate professional book for you to learn how to create professional, beautiful, and responsive websites. Also, if you are a student, an entry-level web developer, or a freelance designer, this book will give you the knowledge you need to create a great website in a couple of hours. TABLE OF CONTENTS 1. About HTML5 and CSS3 2. Installing a Web Server 3. Visual Studio Code 4. The Developer Console 5. Introduction to HTML5 6. The HTML5 Canvas 7. Rectangles and Fills 8. Writing on the Canvas 9. Drawing on the Canvas 10. Manipulating the Canvas 11. Advanced Canvas Features 12. Using Geolocation 13. Form Handling 14. Local Storage and More 15. Audio and Video 16. Introduction to CSS3 17. CSS3 Attribute Selectors 18. Creating Backgrounds 19. Building Borders 20. Box and Text Properties 21. Colors and Opacity 22. Text Effects and Web Fonts 23. 2D Transformations 24. 3D and Animation 25. Flexbox Layout 26. CSS Grid 27. Introducing Sass 28. Sass Variables and Flow 29. Advanced Sass

Innovative Numerical Modelling in Geomechanics - Luis Ribeiro e Sousa 2012-05-03

Since the 1990s five books on ‘Applications of Computational Mechanics in Geotechnical Engineering’ have been published. Innovative Numerical Modelling in Geomechanics is the 6th and final book in this series, and contains papers written by leading experts on computational mechanics. The book treats highly relevant topics in the field of geotechnics, such as environmental geotechnics, open and underground excavations, foundations, embankments and rockfill dams, computational systems and oil geomechanics. Special attention is paid to risk in geotechnical engineering, and to recent developments in applying Bayesian networks and Data Mining techniques. Innovative Numerical Modelling in Geomechanics will be of interest to civil, mining and environmental engineers, as well as to engineering geologists. The book will also be useful for academics and researchers involved in geotechnics.

Harmonising Rock Engineering and the Environment - Qihu Qian 2011-09-14

Harmonising Rock Mechanics and the Environment comprises the proceedings (invited and contributed papers) of the 12th ISRM International Congress on Rock Mechanics (Beijing, China, 18-21 October 2011). The contributions cover the entire scope of rock mechanics and rock engineering, with an emphasis on the critical role of both disciplines in sustai

The Unofficial Guide to Open Broadcaster Software - Paul William Richards 2019-05-22

Today more than ever Open Broadcaster Software is being recognized as a valuable video production tool in the broadcast industry. OBS stands for Open Broadcaster Software, and it is the most popular free live-streaming software in the world. OBS is an open-source-software application, and the project is reviewed, maintained, and enhanced by a community of volunteers. Anyone can use it for free and also participate in its development using Github, Dischord, or other online collaboration tools. This guide has been written to compliment an online OSB training course available on Udemy.com. With this guide, the included online course, downloadable materials and a complementary audiobook, anyone interested in learning more about OBS should be able to advance their skills efficiently with these resources. The OBS suite is a versatile tool for recording video and live streaming. It can be used to record presentations, screen-capture sessions, eSports gaming, and much more. OBS can be used to capture and record video, with a robust set of tools for processing audio as well. OBS can eliminate the need for expensive internal capture cards with the integration of the NewTek(R) NDI(R), and it simplifies the process of screen recording and online streaming.

Instrumentation, Monitoring and Surveillance: Embankment Dams - A.D.M Penman 2018-05-02

Besides giving an historical introduction to embankment dams the book describes the need for instrumentation, planning procurement and installation practices of instruments. The significance of visual inspection and techniques, of monitoring various parameters, seepage, pore pressure, surface and internal displacements, earth pressures and seismic behaviour, through instrumentation has been described. Collection and processing of data and their use for back analysis to check stability of a dam at various stages of construction and reservoir filling have been suggested. In addition to case histories quoted in various chapters, an exclusive chapter on select case histories has been added which describes the conventional and latest instruments that are being used and methods adopted for installation, monitoring and analyses of data.

Unsaturated Soil Mechanics - from Theory to Practice - Zhenghan Chen 2015-10-14

In the past decades advances have been made in the research and practice on unsaturated soil mechanics. In 2000 the first Asia-Pacific Conferences on Unsaturated Soils was organized in Singapore. Since then, four conferences have been held under the continued support of the Technical Committee on Unsaturated Soils (TC106) of the International Socie

Transit Development in Rock Mechanics - Meifeng Cai 2014-10-20

Transit Development in Rock Mechanics—Recognition, Thinking and Innovation contains 150 papers presented at the 3rd ISRM International Young Scholars’ Symposium on Rock Mechanics (8-10 November 2014, Xi’an, China). The volume focusses on the transitional development in rock mechanics research from surface to underground mining and from shallow to a deep rock excavations, and on the transition of knowledge, thinking and innovation from pioneers to the young generation. The contributions cover a wide range of topics: Field investigation and measurements Physical and mechanical properties of rocks Analysis and design methods for rock engineering Numerical and physical modeling Multi-fields coupling analysis methods Rock slope, tunnel and foundation engineering Monitoring and control of rock pressure in underground engineering Dynamic rock mechanics and blasting Support and reinforcement techniques for geotechnical engineering Prediction and control of artificial hazards with excavation in rock Transit Development in Rock Mechanics—Recognition, Thinking and Innovation will be invaluable to engineers and academics interested or involved in rock mechanics, geotechnical engieering, mine engineering and underground engineering. The Symposium was organized by the Commission on Education of International Society for Rock Mechanics and Xi’an University of Science and Technology, and sponsored by the International Society for Rock Mechanics (ISRM) and the Chinese Society for Rock Mechanics and Engineering (CSRME).

Rise to the Occasion - Brad Ross 2017-01-15

The story of a crisis of epic proportion and the lessons of leadership, innovation, motivation, and teamwork that effectively saved lives and the mine. Rise to the Occasion tells the dramatic story of the men and women who safely led Utah’s 107-year-old Bingham Canyon Mine through the largest mining highwall failure in history. The Manefay failure resulted in 144.4 million tons of rock plummeting more than 2,000 feet and traveling 1.5 miles within 90 seconds—without a single death or injury. The story is told through the eyes of an insider, as the author was brought into the mine just six short weeks before the failure and was a key member of the management team. It’s a Story Only He Can Tell. Illustrated with 160 full-color aerial and ground photos, charts, and illustrations, Rise to the Occasion details the unfolding events of the preparation, failure, and recovery efforts in moment-by-moment

accounts. The author then leads the reader to valuable lessons that were learned and how to apply these lessons to any organization that faces risks. The reader will learn to manage a crisis or normal operations by: • Understanding, measuring, and acting on the greatest risks facing the organization. • Creating a culture, based on communication, that inspires dedication, trust, and success. • Wearing a “Black Hat” to challenge thinking that can blind an organization. • Setting “impossible” goals that will not only be met but exceeded. • Breaking down silos to improve teamwork and solve problems. • Reducing bureaucracy and empowering people to increase innovation and expedite solutions. • Using independent experts to provide different points of view and audit the processes.

Scale-Size and Structural Effects of Rock Materials - Shuren Wang 2020-01-24

Scale-Size and Structural Effects of Rock Materials presents the latest research on the scale-size and structural effects of rock materials, including test methods, innovative technologies, and applications in indoor testing, rock mechanics and rock engineering. Importantly, the book explains size-dependent failure criteria, including the multiaxial failure and Hoek-Brown failure criterion. Five chapters cover the size effect of rock samples, rock fracture toughness, scale effects of rock joints, microseismic monitoring and application, and structural effects of rock blocks. The book reflects on the scientific and technical challenges from extensive research in Australia and China. The title is innovative, practical and content-rich. It will be useful to mining and geotechnical engineers researching the scale-size and structural effects of rock materials, including test methods, innovative technologies and applications in indoor testing, rock mechanics, and engineering, and to those on-site technical specialists who need a reliable and up to date reference. Presents the latest theory and research on the scale, size and structure of rock materials Develops new methods for evaluating the scale-size dependency and structural effects of rock and rock-like materials Describes new technologies in mining engineering, tunneling engineering and slope engineering Provides an account of size-dependent failure criterion, including multiaxial and Hoek-Brown Gives practical and theoretical insights based on extensive experience on Australian and Chinese geotechnical projects

Proceedings of the 16th International Conference on Soil Mechanics and Geotechnical Engineering - The Organizing Committee of the 16th ICSMGE 2005-09-12

The 16th ICSMGE responds to the needs of the engineering and construction community, promoting dialog and exchange between academia and practice in various aspects of soil mechanics and geotechnical engineering. This is reflected in the central theme of the conference 'Geotechnology in Harmony with the Global Environment'. The proceedings of the conference are of great interest for geo-engineers and researchers in soil mechanics and geotechnical engineering. Volume 1 contains 5 plenary session lectures, the Terzaghi Oration, Heritage Lecture, and 3 papers presented in the major project session. Volumes 2, 3, and 4 contain papers with the following topics: Soil mechanics in general; Infrastructure and mobility; Environmental issues of geotechnical engineering; Enhancing natural disaster reduction systems; Professional practice and education. Volume 5 contains the report of practitioner/academic forum, 20 general reports, a summary of the sessions and workshops held during the conference.

FIDIC Conditions of Contract for Design, Build and Operate Projects - International Federation of Consulting Engineers 2008

The Inside Battle - Marjorie Morrison 2012

Every day, a battle is being fought for the mental health of our military personnel.In this gripping expose, Marjorie Morrison, takes readers behind the lines to show us the crisis facing our military's mental healthcare system.When Morrison left her thriving private psychology practice for a three-month assignment at the Marine Corps Recruit Depot, she hoped she would make a difference in the lives of Marines. She had no idea that it was she who would be changed.Those three months grew into a yearlong project, but the more Morrison tried to do her best for them, the more roadblocks she met. Despite the broken system, she was and is determined to help protect service member's mental health. The Inside Battle offers readers a glimpse into the current crisis through Morrison's personal experience and empowers them to make a difference in the lives of the men and women of the military.Marjorie Morrison has helped me to see that we have the power, the knowledge and most importantly the responsibility to protect each and every person who raises their hand and swears to protect our country. It is our duty as civilians ¦to fight for the men and women who fight for us. We know today how to support people before the stress happens so they don't have to come home broken.Debbie FordN.Y. Times best selling author of Why Good People Do Bad Things and co-author of The Shadow Effect

Experimental Vibration Analysis for Civil Structures - Jian Zhang 2020-11-04

Experimental Vibration Analysis for Civil Structures: Testing, Sensing, Monitoring, and Control covers a wide range of topics in the areas of vibration testing, instrumentation, and analysis of civil engineering and critical infrastructure. It explains how recent research, development, and applications in experimental vibration analysis of civil engineering structures have progressed significantly due to advancements in the fields of sensor and testing technologies, instrumentation, data acquisition systems, computer technology, computational modeling and simulation of large and complex civil infrastructure systems. The book also examines how cutting-edge artificial intelligence and data analytics can be applied to infrastructure systems. Features: Explains how recent technological developments have resulted in addressing the challenge of designing more resilient infrastructure Examines numerous research studies conducted by leading scholars in the field of infrastructure systems and civil engineering Presents the most emergent fields of civil engineering design, such as data analytics and Artificial Intelligence for the analysis and performance assessment of infrastructure systems and their resilience Emphasizes the importance of an interdisciplinary approach to develop the modeling, analysis, and experimental tools for designing more resilient and intelligent infrastructures Appropriate for practicing engineers and upper-level students, Experimental Vibration Analysis for Civil Structures: Testing, Sensing, Monitoring, and Control serves as a strategic roadmap for further research in the field of vibration testing and instrumentation of infrastructure systems.

Rock Mechanics: Achievements and Ambitions - Meifeng Cai 2011-09-22

Rock Mechanics: Achievements and Ambitions contains the papers accepted for the 2nd ISRM International Young Scholars’ Symposium on Rock Mechanics, which was sponsored by the ISRM and held on 14–16 October 2011 in Beijing, China, immediately preceding the 12th ISRM Congress on Rock Mechanics. Highlighting the work of young teachers, researchers and practitioners, the present work provides an important stimulus for the next generation of rock engineers, because in the future there will be more emphasis on the use of the Earth’s resources and their sustainability, and more accountability of engineers’ decisions. In this context, it is entirely appropriate that the Symposium venue for the young scholars was in China — because of the rock mechanics related work that is anticipated in the future. For example, in the Chinese Academy of Sciences report, “Energy Science and Technology in China: A Roadmap to 2050”, it is predicted that China’s total energy demand will reach 31, 45, 61 and 66 x 108 tce (tonnes of coal equivalent) in 2010, 2020, 2035, 2050. The associated per capita energy consumption for the same years is estimated at 2.3, 3.1, 4.1 and 4.6 tce. This increasing demand will be met, inter alia, by the continued operation and development of new coal mines, hydroelectric plants and nuclear power stations with one or more underground nuclear waste repositories, all of which will be improved by more modern methods of rock engineering design developed by young scholars. In particular, enhanced methods of site investigation, rock characterisation, rock failure understanding, computer modelling, and rock excavation and support are needed. The topics in the book include contributions on: - Field investigation and observation - Rock constitutive relations and property testing - Numerical and physical modeling for rock engineering - Information technology, artificial intelligence and other advanced techniques - Underground and surface excavation and reinforcement techniques - Dynamic rock mechanics and blasting - Predication and prevention of geo-environmental hazard - Case studies of typical rock engineering Many of the 200 papers address these topics and demonstrate the skills of the young scholars, indicating that we can be confident in the continuing development of rock mechanics and rock engineering, leading to more efficient, safer and economical structures built on and in rock masses. Rock Mechanics: Achievements and Ambitions will appeal to professionals, engineers and academics in rock mechanics, rock engineering, tunnelling, mining, earthquake engineering, rock dynamics and geotechnical engineering.

Machine Learning - Peter Flach 2012-09-20

Covering all the main approaches in state-of-the-art machine learning research, this will set a new standard as an introductory textbook.

Blender Quick Start Guide - Allan Brito 2018-09-28

Learn the new Blender 2.8 user interface and make 3D models Key Features Find your way round the new user interface and tools of Blender 2.8 Create materials, apply textures and render scenes Use the new cutting-edge real-time render EEVEE in your projects Book Description Blender is open source 3D creation software. With a long history and an enthusiastic community of users, it is the ideal choice for almost any kind of work with 3D modeling or animation. However, for new users, its power and flexibillity can sometimes be daunting, and that's when you need this book! The book starts by showing you round the all-new Blender 2.8 user interface. You'll look at the most commonly-used options and tools, such as navigating in 3D and selecting objects. You will then use and manipulate one of the most important windows of the interface, the 3D View. You'll learn how to use essential tools for working with 3D modeling. To give your models the feel of real-world objects, you'll learn how to create materials and set up surfaces. You'll see how to use Physically-Based Rendering (PBR), which allows you to craft realistic surfaces such as wood, stone, and metal. You will also work with Eevee, a new real-time render engine in Blender. You will see how to add motion to objects, making use of Blender's impressive 3D animation features. Finally, you'll learn how to create scenes and organize them for rendering, and later add titles and effects using built-in Blender tools. By the end of the book, you will be able to use Blender 2.8 new UI, Create 3D Models with textures, Animations, and Render them in real-time using Eevee. What you will learn Manipulate and visualize your 3D objects in Blender Use polygon modeling tools such as extrude, loop cut, and more Apply precision modeling tools like snapping and the 3D Cursor Render a scene using the real-time engine Eevee Create materials for Eevee and Cycles Render a scene with the Eevee real-time engine Use PBR textures to craft realistic surfaces such as wood with the Shader Editor Add motion and animation using keyframes Create animation loops using curves and modifiers Who this book is for This book is for anyone interested in taking their steps with Blender. If you're an experienced 3D artists or hobbyist, this book will help you with its features.

Underground Excavations in Rock - E.T. Brown 1980-06-30

Underground Excavations in Rock deals with the geotechnical aspects of the design of underground openings for mining and civil engineering processes.

Fish Notepad - Carson-Dellosa Publishing Company, Inc. 2010

Perfect for reminders, calendar notes, homework notes, name tags, and much more! Each pad features 50 acid-free, lignin-free sheets and measures approx. 5.75” x 6”. Available in a variety of prints, notepads are an essential addition to any teacher's desk!

Rock Engineering Design - Xia-Ting Feng 2011-07-27

Given the recent advances in site investigation techniques, computing, access to information and monitoring, plus the current emphasis on safety, accountability and sustainability, this book introduces an up-to-date methodology for the design of all types of rock engineering projects, whether surface or underground. Guidance is provided on the nature of the modeling to support design and the information required for design; also included is a procedure for technical auditing of the modeling and design together with the related protocol sheets. Written by two eminent authors, clearly structured and containing many illustrations, this volume is intended for consulting engineers, contractors, researchers, lecturers and students working on rock engineering projects.

Mathematica Cookbook - Sal Mangano 2010-04-02

Mathematica Cookbook helps you master the application's core principles by walking you through real-world problems. Ideal for browsing, this book includes recipes for working with numerics, data structures, algebraic equations, calculus, and statistics. You'll also venture into exotic territory with recipes for data visualization using 2D and 3D graphic tools, image processing, and music. Although Mathematica 7 is a highly advanced computational platform, the recipes in this book make it accessible to everyone -- whether you're working on high school algebra, simple graphs, PhD-level computation, financial analysis, or advanced engineering models. Learn how to use Mathematica at a higher level with functional programming and pattern matching Delve into the rich library of functions for string and structured text manipulation Learn how to apply the tools to physics and engineering problems Draw on Mathematica's access to physics, chemistry, and biology data Get techniques for solving equations in computational finance Learn how to use Mathematica for sophisticated image processing Process music and audio as musical notes, analog waveforms, or digital sound samples

Additive Manufacturing – Developments in Training and Education - Eujin Pei 2018-06-30

This book provides an overview of training and teaching methods, as well as education strategies, for Additive Manufacturing (AM) and its application in different business sectors. It presents real-world applications and case studies to demonstrate the key practical and theoretical fundamentals of AM training, written by international experts from the field. Additive Manufacturing is a rapidly developing technology, and having a well-trained workforce is essential. Accordingly, readers are introduced to new training approaches and recent breakthroughs that can facilitate and accelerate the design, application and implementation of AM. The book’s contributors discuss many topics to provide readers a fundamental grasp of AM, including: · collaboration among educational bodies, and between industry and governments; · strategies for implementing AM training; · new teaching methods; · training programs that provide alternative employment choices; · the need for certification by professional bodies; and · promoting awareness of AM in society. This book offers an excellent source of information for researchers and industrial engineers who are interested in expanding their AM expertise, and learning how to implement it. It will also be of interest to readers who want to learn about the practicalities of adopting training and teaching for AM.

Education for Sustainable Development in Foreign Language Learning - María J. de la Fuente 2021-11-29

This unique volume utilizes the UNESCO Education for Sustainable Development (ESD) framework to illustrate successful integration of sustainability education in post-secondary foreign language (FL) learning. Showcasing a variety of approaches to using content-based instruction (CBI) in college-level courses, this text valuably demonstrates how topics relating to environmental, social, and cultural dimensions of sustainability can be integrated in FL curricula. Chapters draw on case studies from colleges throughout the US and consider theoretical and practical concerns relating to models of sustainability-based teaching and learning. Chapters present examples of project-, problem-, and task-based approaches, as well as field work, debate, and reflective pedagogies to enhance students’ awareness and engagement with sustainable development issues as they acquire a foreign language. Insights and recommendations apply across languages and highlight the potential contribution of FL learning to promote sustainability literacy amongst learners. This text will benefit researchers, academics, and educators in higher education with an interest in Modern Foreign Languages, sustainability education, training, and leadership more broadly.

Teaching and Mobile Learning - Flavia Santoianni 2022-01-31

Teaching and Mobile Learning: Interactive Educational Design is a groundbreaking book which shows how to design innovative educational mobile learning environments to instructional designers, curriculum developers, and learning professionals. The book aims to solicit teachers, educators, and practitioners to adapt their teaching with the help of educational digital models related to mobile technologies. Mobile learning is a revolution in concepts like space, sound production, and learning to get more and more customized in always-connected and ever-changing educational mobile learning environments. Researchers and academicians can be trained in cognition processes in learning management of mixed reality and virtual bodies. Mixed reality mobile technologies are becoming tools for education and training in mixed reality mobile learning. Readers of this book will understand how user and device innovative interactions are borderline with attention deficit disorder, digital amnesia, and information overload. The book develops educational knowledge on how to manage mobile technology and specific learning disorders to monitor the use of smartphones and technology tools and to empower their role in learning enhancement processes.

Mixing Secrets for the Small Studio - Mike Senior 2018-08-06

Discover how to achieve release-quality mixes even in the smallest studios by applying power-user techniques from the world's most successful producers. Mixing Secrets for the Small Studio is the best-selling primer for small-studio enthusiasts who want chart-ready sonics in a hurry. Drawing on the back-room strategies of more than 160 famous names, this entertaining and down-to-earth guide leads you step-by-step through the entire mixing process. On the way, you'll unravel the mysteries of every type of mix processing, from simple EQ and compression through to advanced spectral dynamics and "fairy dust" effects. User-friendly explanations introduce technical concepts on a strictly need-to-know basis, while chapter summaries and assignments are perfect for school and college use. ■ Learn the subtle editing, arrangement, and monitoring tactics which give industry insiders their

competitive edge, and master the psychological tricks which protect you from all the biggest rookie mistakes. ■ Find out where you don't need to spend money, as well as how to make a limited budget really count. ■ Pick up tricks and tips from leading-edge engineers working on today's multi-platinum hits, including Derek "MixedByAli" Ali, Michael Brauer, Dylan "3D" Dresdow, Tom Elmhirst, Serban Ghenea, Jacquire King, the Lord-Alge brothers, Tony Maserati, Manny Marroquin, Noah "50" Shebib, Mark "Spike" Stent, DJ Swivel, Phil Tan, Andy Wallace, Young Guru, and many, many more... Now extensively expanded and updated, including new sections on mix-buss processing, mastering, and the latest advances in plug-in technology.

Python and HDF5 - Andrew Collette 2013-10-21

Gain hands-on experience with HDF5 for storing scientific data in Python. This practical guide quickly gets you up to speed on the details, best practices, and pitfalls of using HDF5 to archive and share numerical datasets ranging in size from gigabytes to terabytes. Through real-world examples and practical exercises, you'll explore topics such as scientific datasets, hierarchically organized groups, user-defined metadata, and interoperable files. Examples are applicable for users of both Python 2 and Python 3. If you're familiar with the basics of Python data analysis, this is an ideal introduction to HDF5. Get set up with HDF5 tools and create your first HDF5 file Work with datasets by learning the HDF5 Dataset object Understand advanced features like dataset chunking and compression Learn how to work with HDF5's hierarchical structure, using groups Create self-describing files by adding metadata with HDF5 attributes Take advantage of HDF5's type system to create interoperable files Express relationships among data with references, named types, and dimension scales Discover how Python mechanisms for writing parallel code interact with HDF5

Behavior of Simulated Longwall Gob Material - Deno M. Pappas 1993

Volcanic Unrest - Joachim Gottsmann 2018-12-18

This open access book summarizes the findings of the VUELCO project, a multi-disciplinary and cross-boundary research funded by the European Commission's 7th framework program. It comprises four broad topics: 1. The global significance of volcanic unrest 2. Geophysical and geochemical fingerprints of unrest and precursory activity 3. Magma dynamics leading to unrest phenomena 4. Bridging the gap between science and decision-making Volcanic unrest is a complex multi-hazard phenomenon. The fact that unrest may, or may not lead to an imminent eruption contributes significant uncertainty to short-term volcanic hazard and risk assessment. Although it is reasonable to assume that all eruptions are associated with precursory activity of some sort, the understanding of the causative links between subsurface processes, resulting unrest signals and imminent eruption is incomplete. When a volcano evolves from dormancy into a phase of unrest, important scientific, political and social questions need to be addressed. This book is aimed at graduate students, researchers of volcanic phenomena, professionals in volcanic hazard and risk assessment, observatory personnel, as well as emergency managers who wish to learn about the complex nature of volcanic unrest and how to utilize new findings to deal with unrest phenomena at scientific and emergency managing levels. This book is open access under a CC BY license.

Applied Mathematics, Modeling and Computer Simulation - C.-H. Chen 2022-02-25

The pervasiveness of computers in every field of science, industry and everyday life has meant that applied mathematics, particularly in relation to modeling and simulation, has become ever more important in recent years. This book presents the proceedings of the 2021 International Conference on Applied Mathematics, Modeling and Computer Simulation (AMMCS 2021), hosted in Wuhan, China, and held as a virtual event from 13 to 14 November 2021. The aim of the conference is to foster the knowledge and understanding of recent advances across the broad fields of applied mathematics, modeling and computer simulation, and it provides an annual platform for scholars and researchers to communicate important recent developments in their areas of specialization to colleagues and other scientists in related disciplines. This year more than 150 participants were able to exchange knowledge and discuss recent developments via the conference. The book contains 115 peer-reviewed papers, selected from more than 250 submissions and ranging from the theoretical and conceptual to the strongly pragmatic and all addressing industrial best practice. Topics covered include mathematical modeling and applications, engineering applications and scientific computations, and the simulation of intelligent systems. Providing an overview of recent development and with a mix of practical experiences and enlightening ideas, the book will be of interest to researchers and practitioners everywhere.

Applied Multidimensional Geological Modeling - Alan Keith Turner 2021-06-21

Over the past decades, geological survey organizations have digitized their data handling and holdings, unlocking vast amounts of data and information for computer processing. They have undertaken 3-D modeling alongside, and in some cases instead of, conventional geological mapping and begun delivering both data and interpretations to increasingly diverse stakeholder communities. Applied Multidimensional Geological Modeling provides a citable central source that documents the current capabilities and contributions of leading geological survey organization and other practitioners in industry and academia that are producing multidimensional geological models. This book focuses on applications related to human interactions with conditions in the shallow subsurface, within 100-200 m of the surface. The 26 chapters, developed by 100 contributors associated with 37 organizations, discuss topics relevant to any geologist, scientist, engineer, urban planner, or decision maker whose practice includes assessment or planning of underground space.

The FIDIC Forms of Contract - Nael G. Bunni 2013-02-05

In September 1999, FIDIC introduced its new Suite of Contracts,which included a "new" Red, Yellow, Silver and Greenforms of contract. The "new" Red Book was intended toreplace the 1992 fourth edition of the Red Book, with the ambitionthat its use would cease with time. This ambition has notmaterialised and is unlikely to do so in the future. Despite the importance of the 1999 Forms, there has been verylittle published on the new concepts adopted in them and how theyinteract with the previous forms. This important work considersthese aspects together with the many developments affecting thefourth edition of the Red Book that have taken place since 1997,when the second edition of this book was published, and relatesthem to key contracting issues. It is written by a charteredengineer, conciliator and international arbitrator with wideexperience in the use of the FIDIC Forms and in the various disputeresolution mechanisms specified in them. Important features of this book include: · background and concepts of the various forms ofcontract; · a detailed comparison of the wording of the1999 threemain forms, which although similar in nature; it neverthelesssignificantly differs in certain areas where the three formsdiverge due to their intended purpose; · analysis of the rights and obligations of the partiesinvolved in the contract and the allocation of risksconcerned; · a range of 'decision tree' charts, analysingthe main features of the 1992 Red Book, including risks,indemnities and insurances, claims and counterclaims, variations,procedure for claims, programme and delay, suspension, payments andcertificates, dispute resolution mechanisms, and disputeboards; · a much enlarged discussion of the meaning of"claim" and "dispute" and the types ofclaim with a discussion of the Notice provision in the 1999 formsof contract for the submittal of claims by a contractor and by anemployer; · the FIDIC scheme of indemnities and insurancerequirements; and the methods of dispute resolution provided by thevarious forms of contract; and · five new chapters in this third edition, the first fourchapters deal with each of the 1999 forms and the fifth chapter isconfined to the topic of Dispute Boards.

Best iPhone Apps - J.D. Biersdorfer 2010-09-22

With over 250,000 apps to choose from in Apple's App Store, you can make your iPhone or iPod Touch do just about anything you can imagine -- and almost certainly a few things you would never think of. While it's not hard to find apps, it is frustratingly difficult to find the the best ones. That's where this new edition of Best iPhone Apps comes in. New York Times technology columnist J.D. Biersdorfer has stress-tested hundreds of the App Store's mini-programs and hand-picked more than 200 standouts to help you get work done, play games, stay connected with friends, explore a new city, get in shape, and more. With your device, you can use your time more efficiently with genius productivity apps, or fritter it away with deliriously fun games. Play the part of a local with brilliant travel apps, or stick close to home with apps for errands, movie times, and events. Get yourself in shape with fitness programs, or take a break and find the best restaurants in town. No matter how you want to use your iPhone or iPod Touch, Best iPhone Apps helps you unlock your glossy gadget's potential. Discover great apps to help you: Get work done Connect with friends Play games Juggle documents Explore what's nearby Get in shape Travel the world Find new music Dine out Manage your money ...and much more!

Computational Geomechanics and Hydraulic Structures - Sheng-Hong Chen 2018-06-21

This book presents recent research into developing and applying computational tools to estimate the performance and safety of hydraulic structures from the planning and construction stage to the service period. Based on the results of a close collaboration between the author and his colleagues, friends, students and field engineers, it shows how to achieve a good correlation between numerical computation and the actual in situ behavior of hydraulic structures. The book’s heuristic and visualized style disseminates the philosophy and road map as well as the findings of the research. The chapters reflect the various aspects of the three typical and practical methods (the finite element method, the block element method, the composite element method) that the author has been working on and made essential contributions to since the 1980s. This book is an advanced continuation of Hydraulic Structures by the same author, published by Springer in 2015.