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This document presents state-of-the-practice information on the evaluation of soil and rock properties for geotechnical design applications. This document addresses the entire range of materials potentially encountered in highway engineering practice, from soft clay to intact rock and variations of materials that fall between these two extremes. Information is presented on parameters measured, evaluation of data quality, and interpretation of properties for conventional soil and rock laboratory testing, as well as in situ devices such as field vane testing, cone penetration testing, dilatometer, pressuremeter, and borehole jack. This document provides the design

engineer with information that can be used to develop a rationale for accepting or rejecting data and for resolving inconsistencies between data provided by different laboratories and field tests. This document also includes information on: (1) the use of Geographical Information Systems (GIS) and Personal Data Assistance devices for the collection and interpretation of subsurface information; (2) quantitative measures for evaluating disturbance of laboratory soil samples; and (3) the use of measurements from geophysical testing techniques to obtain information on the modulus of soil. Also included are chapters on evaluating properties of special soil materials (e.g., loess, cemented sands, peats and organic soils, etc.) and the use of sta-

tistical information in evaluating anomalous data and obtaining design values for soil and rock properties. An appendix of three detailed soil and rock property selection examples is provided which illustrate the application of the methods described in the document.

Rock Slope Engineering covers the investigation, design, excavation and remediation of man-made rock cuts and natural slopes, primarily for civil engineering applications. It presents design information on structural geology, shear strength of rock and ground water, including weathered rock. Slope design methods are discussed for planar, wedge, circular and toppling failures, including seismic design and numerical analysis. Information is also provided

on blasting, slope stabilization, movement monitoring and civil engineering applications. This fifth edition has been extensively up-dated, with new chapters on weathered rock, including shear strength in relation to weathering grades, and seismic design of rock slopes for pseudo-static stability and Newmark displacement. It now includes the use of remote sensing techniques such as LiDAR to monitor slope movement and collect structural geology data. The chapter on numerical analysis has been revised with emphasis on civil applications. The book is written for practitioners working in the fields of transportation, energy and industrial development, and undergraduate and graduate level courses in geological engineering.

Guidelines for Open Pit Slope Design is a comprehensive account of the open pit slope design process. Created as an outcome of the Large Open Pit (LOP) project, an international research and technology transfer project on rock slope stability in open pit mines, this book provides an up-to-date compendium of knowledge of the slope design processes that should be followed and the tools that are available to aid slope design practitioners. This book

links innovative mining geomechanics research into the strength of closely jointed rock masses with the most recent advances in numerical modelling, creating more effective ways for predicting rock slope stability and reliability in open pit mines. It sets out the key elements of slope design, the required levels of effort and the acceptance criteria that are needed to satisfy best practice with respect to pit slope investigation, design, implementation and performance monitoring. Guidelines for Open Pit Slope Design comprises 14 chapters that directly follow the life of mine sequence from project commencement through to closure. It includes: information on gathering all of the field data that is required to create a 3D model of the geotechnical conditions at a mine site; how data is collated and used to design the walls of the open pit; how the design is implemented; up-to-date procedures for wall control and performance assessment, including limits blasting, scaling, slope support and slope monitoring; and how formal risk management procedures can be applied to each stage of the process. This book will assist in meeting stakeholder requirements for pit slopes that are stable,

in regards to safety, ore recovery and financial return, for the required life of the mine.

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

"Rock Engineering provides a comprehensive explanation of the geological principles and ground investigations involved with the geotechnical design and engineering of underground projects. It offers an internationally applicable, practical guide for engineers and geologists responsible for considering different ground conditions, design and planning for excavation and underground projects. This informative and highly illustrated resource combines theoretical knowledge and practical examples of rock engineering with detailed case studies of tunnelling and hydropower projects. Theories and realities of risks and uncertainties are discussed to provide an understanding of the considerations needed for successfully planning and executing underground projects. This fully updated edi-

tion has added focus on rock engineering applications in design, planning and excavation. Special chapters have been added dealing with the practical use of the Eurocode in rock design, the design principles of some special underground projects and three case histories. The ambition is to better cover the complex engineering geological process in rock construction, from ground investigation to execution"--Back cover.

Rock Slope Engineering covers the investigation, design, excavation and remediation of man-made rock cuts and natural slopes, primarily for civil engineering applications. It presents design information on structural geology, shear strength of rock and ground water, including weathered rock. Slope design methods are discussed for planar, wedge, circular and toppling failures, including seismic design and numerical analysis. Information is also provided on blasting, slope stabilization, movement monitoring and civil engineering applications. This fifth edition has been extensively up-dated, with new chapters on weathered rock, including shear strength in relation to weathering grades, and seismic design of rock slopes for pseudo-static

stability and Newmark displacement. It now includes the use of remote sensing techniques such as LiDAR to monitor slope movement and collect structural geology data. The chapter on numerical analysis has been revised with emphasis on civil applications. The book is written for practitioners working in the fields of transportation, energy and industrial development, and undergraduate and graduate level courses in geological engineering.

"This project aimed to collect and critically review the existing evidence on practices relevant to improving patient safety"--P. v. This second edition of the successful Foundations on Rock presents an up-to-date practical reference book describing current engineering practice in the investigation, design and construction of foundations on rock. An extra chapter on Tension Foundations has been included. The methods set out are readily applicable to high rise buildings, bridges, dams and structures subject to uplift and turning loads. Foundations on Rock differs from the many texts and handbooks on soil foundations in that it focuses on the effect of geology on the stability and settlement of rock foundations. While the intact rock may be

strong, defects in the rock such as faults, joints and cavities, and the deterioration of the rock with time, will have a significant effect on foundation performance. Methods of detecting such defects are described, and their implications for foundation design and treatment are elaborated.

The "Red Book" presents a background to conventional foundation analysis and design. The text is not intended to replace the much more comprehensive 'standard' textbooks, but rather to support and augment these in a few important areas, supplying methods applicable to practical cases handled daily by practising engineers and providing the basic soil mechanics background to those methods. It concentrates on the static design for stationary foundation conditions. Although the topic is far from exhaustively treated, it does intend to present most of the basic material needed for a practising engineer involved in routine geotechnical design, as well as provide the tools for an engineering student to approach and solve common geotechnical design problems.

The Newnes Know It All Series takes the best of what our authors have written to

create hard-working desk references that will be an engineer's first port of call for key information, design techniques and rules of thumb. Guaranteed not to gather dust on a shelf! Audio engineers need to master a wide area of topics in order to excel. The Audio Engineering Know It All covers every angle, including digital signal processing, power supply design, microphone and loudspeaker technology as well as audio compression. A 360-degree view from our best-selling authors Includes such topics as fundamentals, compression, and test and measurement The ultimate hard-working desk reference; all the essential information, techniques and tricks of the trade in one volume

Laterite Soil Engineering is one of a few books about solving engineering problems with the help of engineering pedology. This book presents the latest information on the laterite soils' geotechnical characteristics and engineering behavior. It shows that laterite soils are different from natural soils and that most laterite soils can be evaluated for engineering purposes using accepted theories and well-known test procedures for temperate-zone soils. This book also shows that modern con-

cepts based on pedological considerations are very useful and take a logical approach to the identification and evaluation of laterite soils for engineering purposes. The first four chapters focus on reviewing information about the processes of tropical weathering and laterization. Chapter five summarizes information about the location, morphology and composition of laterite soils. Chapter six highlights the geotechnical implications of the pedogenic processes of tropical weathering, and it emphasizes the contribution of the results of these pedogenic processes to the deviations of engineering behavior of the problem of laterite soils. In addition, chapter seven discusses the influence of laterite soil genesis on the physic-chemical characteristics based on comparing the properties of three genetic soil groups formed under three different weathering conditions. Chapters eight through nineteen discuss the geotechnical characteristics and evaluation of laterite soils, and the effects of pedogenesis and soil-forming factors on the geotechnical and stabilization characteristics of laterite soils. The last chapter discusses the little information that exists on the application of la-

terite soils in engineering problems. The stability of rock slopes is an important issue in both civil and mining engineering. On civil projects, rock cuts must be safe from rock falls and large-scale slope instability during both construction and operation. In open pit mining, where slope heights can be many hundreds of meters, the economics of the operation are closely related to the steepest stable slope angle that can be mined. This extensively updated version of the classic text, *Rock Slope Engineering* by Hoek and Bray, deals comprehensively with the investigation, design and operation of rock slopes. Investigation methods include the collection and interpretation of geological and groundwater data, and determination of rock strength properties, including the Hoek Brown rock mass strength criterion. Slope design methods include the theoretical basis for the design of plane, wedge, circular and toppling failures, and design charts are provided to enable rapid checks of stability to be carried out. New material contained in this book includes the latest developments in earthquake engineering related to slope stability, probabilistic analysis, numerical analysis, blasting, slope movement moni-

toring and stabilization methods. The types of stabilization include rock anchors, shotcrete, drainage and scaling, as well as rock fall protecting methods involving barriers, ditches, nets and sheds. *Rock Slopes: Civil and Mining Engineering* contains both worked examples illustrating data interpretation and design methods, and chapters on civil and mining case studies. The case studies demonstrate the application of design methods to the construction of stable slopes in a wide variety of geological conditions. The book provides over 300 carefully selected references for those who wish to study the subject in greater detail. It also includes an introduction by Dr. Evert Hoek.

Rockfall Engineering is an up-to-date, international picture of the state of the art in rockfall engineering. The three basic stages of rockfalls are considered: the triggering stage, the motion stage, and the interaction with a structure stage; along with contributions including structural characterization of cliffs, remote monitoring, stability analysis, boulder propagation, design of protection structures and risk assessment. Academic contributions are illustrated by

practical examples, and completed by engineering contributions where practical purposes are thoroughly considered. This title is intended for engineers, students as well as researchers.

This classic handbook deals with the geotechnical problems of rock slope design. It has been written for the non-specialist mining or civil engineer, with worked examples, design charts, coverage of more detailed analytical methods, and of the collection and interpretation of geological and groundwater information and tests for the mechanical properties of rock. This second edition of the successful *Foundations on Rock* presents an up-to-date practical reference book describing current engineering practice in the investigation, design and construction of foundations on rock. An extra chapter on Tension Foundations has been included. The methods set out are readily applicable to high rise buildings, bridges, The definitive guide to the critical issue of slope stability and safety *Soil Strength and Slope Stability, Second Edition* presents the latest thinking and techniques in the assessment of natural and man-made slopes, and the factors that cause them to

survive or crumble. Using clear, concise language and practical examples, the book explains the practical aspects of geotechnical engineering as applied to slopes and embankments. The new second edition includes a thorough discussion on the use of analysis software, providing the background to understand what the software is doing, along with several methods of manual analysis that allow readers to verify software results. The book also includes a new case study about Hurricane Katrina failures at 17th Street and London Avenue Canal, plus additional case studies that frame the principles and techniques described. Slope stability is a critical element of geotechnical engineering, involved in virtually every civil engineering project, especially highway development. Soil Strength and Slope Stability fills the gap in industry literature by providing practical information on the subject without including extraneous theory that may distract from the application. This balanced approach provides clear guidance for professionals in the field, while remaining comprehensive enough for use as a graduate-level text. Topics include: Mechanics of soil and limit equilibrium procedures Ana-

lyzing slope stability, rapid drawdown, and partial consolidation Safety, reliability, and stability analyses Reinforced slopes, stabilization, and repair The book also describes examples and causes of slope failure and stability conditions for analysis, and includes an appendix of slope stability charts. Given how vital slope stability is to public safety, a comprehensive resource for analysis and practical action is a valuable tool. Soil Strength and Slope Stability is the definitive guide to the subject, proving useful both in the classroom and in the field.

This is the 11th Volume in the series Memorial Tributes compiled by the National Academy of Engineering as a personal remembrance of the lives and outstanding achievements of its members and foreign associates. These volumes are intended to stand as an enduring record of the many contributions of engineers and engineering to the benefit of humankind. In most cases, the authors of the tributes are contemporaries or colleagues who had personal knowledge of the interests and the engineering accomplishments of the deceased. Through its members and foreign associ-

ates, the Academy carries out the responsibilities for which it was established in 1964. Under the charter of the National Academy of Sciences, the National Academy of Engineering was formed as a parallel organization of outstanding engineers. Members are elected on the basis of significant contributions to engineering theory and practice and to the literature of engineering or on the basis of demonstrated unusual accomplishments in the pioneering of new and developing fields of technology. The National Academies share a responsibility to advise the federal government on matters of science and technology. The expertise and credibility that the National Academy of Engineering brings to that task stem directly from the abilities, interests, and achievements of our members and foreign associates, our colleagues and friends, whose special gifts we remember in this book.

Paul, a young Irish engineer, follows Evelyn to Berlin. A moving novel about language, memory, building and love. Paul, a young Irish engineer, follows Evelyn to Berlin and begins work on the renovation of a commercial building in Alexanderplatz. Wrestling with a new language, on a site

running behind schedule, and with a relationship in flux, he becomes increasingly untethered. Set against the structural evolution of a sprawling city, this meditation on language, memory and yearning is underpinned by the site's physical reality. As the narration explores the mind's fragile architecture, he begins to map his own strange geography through a series of notebooks, or 'Love notes'. Paul's story will speak to anyone who has known what it is to be in love, or exiled, or simply alone.

Understand and implement VMware Virtual SAN: the heart of tomorrow's Software-Defined Datacenter (SDDC) VMware's breakthrough Software-Defined Datacenter (SDDC) initiative can help you virtualize your entire datacenter: compute, storage, networks, and associated services. Central to SDDC is VMware Virtual SAN (VSAN): a fully distributed storage architecture seamlessly integrated into the hypervisor and capable of scaling to meet any enterprise storage requirement. Now, the leaders of VMware's wildly popular Virtual SAN previews have written the first authoritative guide to this pivotal technology. You'll learn what Virtual SAN is, exactly what it offers, how to implement it, and

how to maximize its value. Writing for administrators, consultants, and architects, Cormac Hogan and Duncan Epping show how Virtual SAN implements both object-based storage and a policy platform that simplifies VM storage placement. You'll learn how Virtual SAN and vSphere work together to dramatically improve resiliency, scale-out storage functionality, and control over QoS. Both an up-to-the-minute reference and hands-on tutorial, Essential Virtual SAN uses realistic examples to demonstrate Virtual SAN's most powerful capabilities. You'll learn how to plan, architect, and deploy Virtual SAN successfully, avoid gotchas, and troubleshoot problems once you're up and running. Coverage includes Understanding the key goals and concepts of Software-Defined Storage and Virtual SAN technology Meeting physical and virtual requirements for safe Virtual SAN implementation Installing and configuring Virtual SAN for your unique environment Using Storage Policy Based Management to control availability, performance, and reliability Simplifying deployment with VM Storage Policies Discovering key Virtual SAN architectural details: caching I/O, VASA, witnesses, pass-through RAID, and more En-

suring efficient day-to-day Virtual SAN management and maintenance Interoperating with other VMware features and products Designing and sizing Virtual SAN clusters Troubleshooting, monitoring, and performance optimization

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

WIDTH: 405pt; BORDER-COLLAPSE: collapse border=0 cellSpacing=0 cellPadding=0 width=540> WIDTH: 405pt; mso-width-source: user-set; mso-width-alt: 19748 width=540> HEIGHT: 31.5pt height=42> BORDER-BOTTOM: #f0f0f0; BORDER-LEFT: #f0f0f0; BACKGROUND-COLOR: transparent; WIDTH: 405pt; HEIGHT: 31.5pt; BORDER-TOP: #f0f0f0; BORDER-RIGHT: #f0f0f0 class=x165 height=42 width=540>GSP 229 contains 54 papers on risk and uncertainty in foundation engineering presented in honor of Fred H. Kulhawy.

Data Structures & Theory of Computation
THERE IS NO STOPPING IT. THE CLOUD IS ARMAGEDDON, STEAMROLLING THE WORLD AT A WALKING PACE. Day 0. From

the wreckage of a research facility in Switzerland, a plume of toxic smoke and ash pours into the sky, forming an impenetrable cloud that is slowly smothering the world in darkness. As Europe disappears beneath the Cloud, a squad of United States marines are sent on a desperate mission to find out what went wrong, and how to undo it before it's too late. Venturing into a cold, dark world, the marines must travel deep under the Cloud, with no comms, no backup, and no idea of what they will face. Day 89. Half a world away, the Cloud has reached the East Coast of the US. With nowhere to run and no hope of survival, the American people have descended into madness, turning on themselves and each other. From the sidelines, an old Tennessee sheriff watches as his country unravels. But he can't bring himself to take the easy way out. Quitting isn't in his DNA. So when one of his deputies asks him to help protect her family, he leads them west, chasing a miracle--a rumor of an old nuclear bunker that just may be their only hope for survival. Because if the Cloud doesn't kill them, what's hiding in the dark will. In his thrilling debut novel *Monstre*, author Duncan Swan crafts a re-

lentless, terrifying, genre-bending tale of courage, desperation, and redemption that shows just how fragile our civilization is, and how far we will go to survive

The stability of rock slopes is an important issue in both civil and mining engineering. On civil projects, rock cuts must be safe from rock falls and large-scale slope instability during both construction and operation. In open pit mining, where slope heights can be many hundreds of meters, the economics of the operation are closely related to the steepest stable slope angle that can be mined. This extensively updated version of the classic text, *Rock Slope Engineering* by Hoek and Bray, deals comprehensively with the investigation, design and operation of rock slopes. Investigation methods.

This volume brings together, from a wide range of experience, such information as may be useful in recognizing, avoiding, controlling, designing for, and correcting movement. Current geologic concepts and engineering principles and techniques are introduced, and both the analysis and control of soil and rock-slopes are addressed. New methods of stability analysis and the

use of computer techniques in implementing these methods are included. Rock slope engineering and the selecting of shear-strength parameters for slope-stability analyses are covered in separate chapters.

Coastlines of the world are as diverse as any geological setting on Earth. *Beaches and Coasts* is an exciting and unique new textbook that provides an exhaustive treatment of the world's different coasts and details the highly varied processes that have shaped them. Having conducted research on coastlines throughout the world, the authors draw on a wealth of experience that broadens the content of chapters and provides for numerous and varied examples. The book furnishes a basic understanding of the tectonic framework, hydrographic regime, climatic setting, and geologic materials that determine the morphology of a coast. Individual chapters are devoted to major coastal environments such as barriers, tidal inlets, marshes, estuaries, lagoons, deltas, glaciated coasts, rocky coasts and many others. *Beaches and Coasts* provides the necessary content for teaching a broad coastal geology course. Though designed for introductory

students, its comprehensive treatment of coastal topics will make it appropriate for many upper level courses. Exciting and unique textbook that provides an exhaustive treatment of the world's different coasts and details the highly varied processes that have shaped them. The authors draw on a wealth of experience that broadens the content of chapters and provides for numerous and varied examples. Provides a basic understanding of the tectonic framework, hydrographic regime, climatic setting, and geologic materials that determine the morphology of a coast. Individual chapters are devoted to major coastal environments such as barriers, tidal inlets, marshes, estuaries, lagoons, deltas, glaciated coasts, rocky coasts, and many others. Provides comprehensive content for teaching a broad coastal geology course for both introductory and upper level courses.

In this second, enlarged edition the author continues to emphasize aspects of rock mechanics. Firm in his belief that there is no better way to study the subject than by the detailed analysis of case histories, Dr Jaeger has incorporated a number of new ones.

Specifically designed as an introduction to the exciting world of engineering, **ENGINEERING FUNDAMENTALS: AN INTRODUCTION TO ENGINEERING** encourages students to become engineers and prepares them with a solid foundation in the fundamental principles and physical laws. The book begins with a discovery of what engineers do as well as an inside look into the various areas of specialization. An explanation on good study habits and what it takes to succeed is included as well as an introduction to design and problem solving, communication, and ethics. Once this foundation is established, the book moves on to the basic physical concepts and laws that students will encounter regularly. The framework of this text teaches students that engineers apply physical and chemical laws and principles as well as mathematics to design, test, and supervise the production of millions of parts, products, and services that people use every day. By gaining problem solving skills and an understanding of fundamental principles, students are on their way to becoming analytical, detail-oriented, and creative engineers. Important Notice: Media content referenced within the product description or

the product text may not be available in the ebook version.

Soils and Foundations for Architects and Engineers, Second Edition is a practical guide to the technology of soil mechanics and foundations, and the application of that technology to the design and construction process. This text provides an up-to-date overview of the classification of soils, the design of foundations, and the behavior of soils under load. Particular emphasis has been given to the subject of piles, piers, and caissons, and to the design and details of construction of basement and retaining walls. New to this edition: Expanded coverage of shear strength of soils, settlement analysis, and expansive soil. Design requirements for prestressed tiebacks, tiedowns, and rock anchors. Expansion of information on pile driving techniques including the use of the Engineering News Formula. A table of British-metric conversions. Many new solved problems and illustrations. In addition to the numerous new improvements, the author also includes: effects of high water tables on architectural and engineering considerations, design of shear keys used in

the transfer of lateral earth pressure from a wall to the supporting element, various drainage alternatives to the structural treatment of adjacent footings, and much more. *Soils and Foundations for Architects and Engineers, Second Edition* can be used in advanced undergraduate and graduate level courses offered in architectural engineering and civil engineering, as well as be used as a reference book by practicing architects, insurance adjusters and attorneys who litigate or adjudicate claims involving soils and foundations.

Written in a concise, easy-to understand manner, *INTRODUCTION TO GEOTECHNICAL ENGINEERING, 2e*, presents intensive research and observation in the field and lab that have improved the science of foundation design. Now providing both U.S. and SI units, this non-calculus-based text is designed for courses in civil engineering technology programs where soil mechanics and foundation engineering are combined into one course. It is also a useful reference tool for civil engineering practitioners. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Scores of talented and dedicated people serve the forensic science community, performing vitally important work. However, they are often constrained by lack of adequate resources, sound policies, and national support. It is clear that change and advancements, both systematic and scientific, are needed in a number of forensic science disciplines to ensure the reliability of work, establish enforceable standards, and promote best practices with consistent application. *Strengthening Forensic Science in the United States: A Path Forward* provides a detailed plan for addressing these needs and suggests the creation of a new government entity, the National Institute of Forensic Science, to establish and enforce standards within the forensic science community. The benefits of improving and regulating the forensic science disciplines are clear: assisting law enforcement officials, enhancing homeland security, and reducing the risk of wrongful conviction and exoneration. *Strengthening Forensic Science in the United States* gives a full account of what is needed to advance the forensic science disciplines, including upgrading of systems and organizational structures, better training, wide-

spread adoption of uniform and enforceable best practices, and mandatory certification and accreditation programs. While this book provides an essential call-to-action for congress and policy makers, it also serves as a vital tool for law enforcement agencies, criminal prosecutors and attorneys, and forensic science educators.

Includes the Report of the Mississippi River Commission, 1881-19 .

This manual presents fundamental principles underlying the design and construction of earth and rock-fill dams. The general principles presented herein are also applicable to the design and construction of earth levees.

Rock falls can be a public safety issue. This book provides comprehensive information on identification of these hazards, and design and construction of protection methods. *Rock Fall Engineering* describes first, the theoretical background to rock fall behavior in terms of the impact and trajectory phases of rock falls, and second, how this information is applied to modeling of rock falls and the design of ditches, fences and sheds. The theory of rock fall behavior is verified by comparing the cal-

culations with five carefully documented case studies. The book covers four main topics as follows: Describes causes of rock falls, including geology, climate and topography, and provides detailed documentation on rock fall impacts and trajectories at five sites with a wide variety of topographic and geologic features Discusses theory of impact mechanics, and its application to velocity and energy changes during impacts and trajectories Reviews methods of modeling rock fall events, and presents analyses for the five case studies Examines rock fall protection in terms of selecting appropriate method(s) for site conditions, and design principles in which the objective is to absorb impact energy in an efficient manner This book, which contains many worked examples, is of interest to practitioners and researchers working in the fields of geological engineering and na-

tural hazards. Duncan C. Wyllie is a principal with Wyllie & Norrish Rock Engineers in Vancouver, Canada, and a registered professional engineer in British Columbia. He has worked on rock fall hazard projects involving the design and construction protection measures since the 1970s. He is the author of Foundations on Rock, Second Edition, and Rock Slope Engineering, Fourth Edition, both published by CRC Press.

In the United States, some populations suffer from far greater disparities in health than others. Those disparities are caused not only by fundamental differences in health status across segments of the population, but also because of inequities in factors that impact health status, so-called determinants of health. Only part of an individual's health status depends on his or her behavior and choice; community-wide problems like poverty, unemployment,

poor education, inadequate housing, poor public transportation, interpersonal violence, and decaying neighborhoods also contribute to health inequities, as well as the historic and ongoing interplay of structures, policies, and norms that shape lives. When these factors are not optimal in a community, it does not mean they are intractable: such inequities can be mitigated by social policies that can shape health in powerful ways. Communities in Action: Pathways to Health Equity seeks to delineate the causes of and the solutions to health inequities in the United States. This report focuses on what communities can do to promote health equity, what actions are needed by the many and varied stakeholders that are part of communities or support them, as well as the root causes and structural barriers that need to be overcome.