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**Landslide Science for a Safer Geoenvironment A&C Black**

This book, written for the benefit of engineering students and practicing engineers alike, is the culmination of the author's four decades of experience related to the subject of electrical measurements, comprising nearly 30 years of experimental research and more than 15 years of teaching at several engineering institutions. The unique feature of this book, apart from covering the syllabi of various universities, is the style of presentation of all important aspects and features of electrical measurements, with neatly and clearly drawn figures, diagrams and colour and b/w photos that illustrate details of instruments among other things, making the text easy to follow and comprehend. Enhancing the chapters are interspersed explanatory comments and, where necessary, footnotes to help better understanding of the chapter contents. Also, each chapter begins with a "recall" to link the subject matter with the related science or phenomenon and fundamental background. The first few chapters of the book comprise "Units, Dimensions and Standards"; "Electricity, Magnetism and Electromagnetism" and "Network Analysis". These topics form the basics of electrical measurements and provide a better understanding of the main topics discussed in later chapters. The last two chapters represent valuable assets of the book, and relate to (a) "Magnetic Measurements", describing many unique features not easily available elsewhere, a good study of which is essential for the design and development of most electric equipment – from motors to transformers and alternators, and (b) "Measurement of Non-electrical Quantities", dealing extensively with the measuring techniques of a number of variables that constitute an important requirement of engineering measurement practices. The book is supplemented by ten appendices covering various aspects dealing with the art and science of electrical measurement and of relevance to some of the topics in main chapters. Other useful features of the book include an elaborate chapter-by-chapter list of symbols, worked examples, exercises and quiz questions at the end of each chapter, and extensive authors' and subject index. This book will be of interest to all students taking courses in electrical measurements as a part of a B.Tech. in electrical engineering. Professionals in the field of electrical engineering will also find the book of use.

**Climate Change** IGI Global

**Transport Properties of Polymeric Membranes** is an edited collection of papers that covers, in depth, many of the recent technical research accomplishments in transport characteristics through polymers and their applications. Using the transport through polymer membranes method leads to high separation efficiency, low running costs, and simple operating procedures compared to conventional separation methods. This book provides grounding in fundamentals and applications to give you all the information you need on using this method. This book discusses the different types of polymer, their blends, composites, nanocomposites and their applications in the field of liquid, gas and vapor transport. Some topics of note include modern trends and applications of polymer nanocomposites in solvent, vapor and gas transport; fundamentals and measurement techniques for gas and vapor transport in polymers; and transport properties of hydrogels. This handpicked selection of topics, and the combined expertise of contributors from global industry, academia, government and private research organizations, make this book an outstanding reference for anyone involved in the field of polymer membranes. - Presents current trends in the field of transport of liquid, gas and vapor through various polymeric systems - Features case studies focused on industrial applications of membrane technology, along with fundamentals of transport and materials - Helps readers quickly look up a particular technique to learn key points, capabilities and drawbacks

**Handbook of Research on Interdisciplinarity Between Science and Mathematics in Education** Springer

UNIT I RELATIVISTIC MECHANICS UNIT II-[A]-OPTICS INTERFERENCE OF LIGHT UNIT II-[B] DIFFRACTION OF LIGHT UNIT-III [A] POLARIZATION OF LIGHT UNIT-III [B] LASER UNIT-IV FIBRE OPTICS AND HOLOGRAPHY

**Current Index to Journals in Education** Elsevier

The background of this research is related to innovative lightweight construction methods for short-term applications realized with highly recyclable materials produced from renewable resources. Specifically, the possibility of using selected paper-based products for design purposes is examined. The main topic discussed regards the state of the art and future potential of joining techniques for assemblies and structures designed with paper-based products. In this context, the preference on paper-tubes for a variety of designs is examined closely. A collection of case studies for selected joining techniques supported with digital tools, fabrication of prototypes and targeted structural experiments demonstrates possibilities and considerations. This book presents the research process and aims to inspire architects, designers and engineers who are eager to discuss on material innovation and the steps that need to be taken to examine the feasibility of such ideas.

**Model-oriented Systems Engineering Science** John Wiley & Sons

**Technologies for Biochemical Conversion of Biomass** introduces biomass biochemical

conversion technology, including the pretreatment platform, enzyme platform, cell refining platform, sugar platform, fermentation platform, and post-treatment platform. Readers will find a systematic treatment, not only of the basics of biomass biochemical conversion and the introduction of each strategy, but also of the current advances of research in this area. Researchers will find the key problems in each technology platform for biomass biochemical conversion identified and solutions offered. This valuable reference book features new scientific research and the related industrial application of biomass biochemical conversion technology as the main content, and then systematically introduces the basic principles and applications of biomass biochemical conversion technology. - Combines descriptions of these technologies to provide strategies and a platform for biochemical conversion in terms of basic knowledge, research advances, and key problems - Summarizes models of biomass biochemical conversion for multiple products - Presents products of biomass biochemical conversion from C1 to C10

**Beyond Stock Stories and Folktales** Universal-Publishers

This book includes keynote presentations, invited speeches, and general session papers presented at the 7th International Symposium on Environmental Vibration and Transportation Geodynamics (formerly the International Symposium on Environmental Vibration), held from October 28 to 30, 2016 at Zhejiang University, Hangzhou, China. It discusses topics such as the dynamic and cyclic behaviors of soils, dynamic interaction of vehicle and transportation infrastructure; traffic-induced structure and soil vibrations and wave propagation; soil-structure dynamic interaction problems in transportation; environmental vibration analysis and testing; vehicle, machine and human-induced vibrations; monitoring, evaluation and control of traffic induced vibrations; transportation foundation deformation and deterioration induced by vibration; structural safety and serviceability of railways, metros, roadways and bridges; and application of geosynthetics in transportation infrastructure. It is a valuable resource for government managers, scientific researchers, and engineering professionals engaged in the field of geotechnical and transportation engineering.

**Kinematic Analysis of Parallel Manipulators by Algebraic Screw Theory** Springer

This volume contains peer-reviewed papers from the Third World Landslide Forum organized by the International Consortium on Landslides (ICL) in June 2014. The complete collection of papers from the Forum is published in three full-color volumes and one mono-color volume.

**The Purpose of Change is Problem Solving** Troubador Publishing Ltd

Systems engineering (SE) is experiencing a significant expansion that encompasses increasingly complex systems. However, a common body of knowledge on how to apply complex systems engineering (CSE) has yet to be developed. A combination of people and other autonomous agents, crossing organization boundaries and continually changing, these hybrid sy

**Ramsey Theory** Cambridge University Press

A guide to the development and manufacturing of pharmaceutical products written for professionals in the industry, revised second edition The revised and updated second edition of *Chemical Engineering in the Pharmaceutical Industry* is a practical book that highlights chemistry and chemical engineering. The book's regulatory quality strategies target the development and manufacturing of pharmaceutically active ingredients of pharmaceutical products. The expanded second edition contains revised content with many new case studies and additional example calculations that are of interest to chemical engineers. The 2nd Edition is divided into two separate books: 1) *Active Pharmaceutical Ingredients (API's)* and 2) *Drug Product Design, Development and Modeling*. The active pharmaceutical ingredients book puts the focus on the chemistry, chemical engineering, and unit operations specific to development and manufacturing of the active ingredients of the pharmaceutical product. The drug substance operations section includes information on chemical reactions, mixing, distillations, extractions, crystallizations, filtration, drying, and wet and dry milling. In addition, the book includes many applications of process modeling and modern software tools that are geared toward batch-scale and continuous drug substance pharmaceutical operations. This updated second edition: Contains 30 new chapters or revised chapters specific to API, covering topics including: manufacturing quality by design, computational approaches, continuous manufacturing, crystallization and final form, process safety Expanded topics of scale-up, continuous processing, applications of thermodynamics and thermodynamic modeling, filtration and drying Presents updated and expanded example calculations Includes contributions from noted experts in the field Written for pharmaceutical engineers, chemical engineers, undergraduate and graduate students, and professionals in the field of pharmaceutical sciences and manufacturing, the second edition of *Chemical Engineering in the Pharmaceutical Industry* focuses on the development and chemical engineering as well as operations specific to the design, formulation, and manufacture of drug substance and products.

**Silicon Photonics & High Performance Computing** IOS Press

This book presents eleven peer-reviewed papers from the 3rd International Conference on Applications of Mathematics and Informatics in Natural Sciences and Engineering (AMINSE2017) held in Tbilisi, Georgia in December 2017. Written by researchers from the region (Georgia, Russia, Turkey) and from Western countries (France, Germany, Italy, Luxemburg, Spain, USA), it discusses key aspects of mathematics and informatics, and their applications in natural sciences and engineering. Featuring theoretical, practical and numerical contributions, the book appeals to scientists from various disciplines interested in applications of mathematics and informatics in natural sciences and engineering.

**Issues in the Use of Neural Networks in Information Retrieval** Elsevier

The development of clean, sustainable energy systems is a preeminent issue in our time. Gas turbines will continue to be important combustion-based energy conversion devices for many decades to come, used for aircraft propulsion, ground-based power generation, and mechanical-drive applications. This book compiles the key scientific and technological knowledge associated with gas turbine emissions into a single authoritative source.

**Gasification for Synthetic Fuel Production** CRC Press

This three-volume set presents entries and primary sources that will impress on readers that what we do—or don't do—today regarding climate change will dramatically influence what life on this planet will be like for untold numbers of generations. How are the behaviors of birds, butterflies, and other migratory animals connected to climate change? What does the term "thermal inertia" mean, and what does this geophysical effect have on predicting what the

planet's future will be like? What is the context for the effects we are seeing on various forms of animal life, from migrating birds to polar bears to mosquitoes that transmit Zika and other diseases? Climate Change: An Encyclopedia of Science, Society, and Solutions combines entries describing Earth's variable climatic history, references to scientific literature, weather record data, and selected primary documents to present readers with a comprehensive account of global warming's effects worldwide. By examining verifiable, quantitative information such as the frequency and intensity of hurricanes and changes in the hydrological cycle, as well as clear patterns and trends of alternating droughts and deluges and wildfires, melting ice, and rising seas, readers will be able to understand why scientists are so concerned about the future of our climate. Researchers will benefit from detailed explanations of scientific topics such as thermal inertia, feedbacks, and tipping points; and receive invaluable context on the role of energy use in climate change, including automobiles and air travel. Readers will learn about the role of China in the current global climate and in the future; the widespread effects of climate change on agriculture; and how indigenous peoples' lives are being impacted, from drought and the Navajos to hunters' lives in the Arctic. The work concludes with thought-provoking debates regarding potential solutions, from wind power and solar power to geo-engineering.

**2D Monoelements** Springer

One of the main concerns of the food industry is the need for high-quality fresh fruits and fruit products with good sensory quality, long shelf life, and high nutritional value. To meet these demands, new processing technologies are under investigation and development. *Advances in Fruit Processing Technologies* incorporates fundamentals in food pro

**Journal of the Physical Society of Japan** Springer

*Materials: Engineering, Science, Processing and Design* is the essential materials engineering text and resource for students developing skills and understanding of materials properties and selection for engineering applications. Taking a unique design-led approach that is broader in scope than other texts, *Materials* meets the curriculum needs of a wide variety of courses in the materials and design field, including introduction to materials science and engineering, engineering materials, materials selection and processing, and behavior of materials. This new edition retains its design-led focus and strong emphasis on visual communication while expanding its coverage of the physical basis of material properties, and process selection. - Design-led approach motivates and engages students in the study of materials science and engineering through real-life case studies and illustrative applications - Highly visual full color graphics facilitate understanding of materials concepts and properties - Chapters on materials selection and design are integrated with chapters on materials fundamentals, enabling students to see how specific fundamentals can be important to the design process - For instructors, a solutions manual, lecture slides, and image bank are available at <https://educate.elsevier.com/book/details/9780081023761> - Links to Granta EduPack sample data sheets: <https://www.grantadesign.com/education/ces-edupack/granta-edupack-data/ces-edupack-sample-datasheets/> for information New to this edition - Expansion of the atomic basis of properties, and the distinction between bonding-sensitive and microstructure-sensitive properties - Process selection extended to include a structured approach to managing the expert knowledge of how materials, processes and design interact (with an introduction to additive manufacturing) - Coverage of materials and the environment has been updated with a new section on Sustainability and Sustainable Technology - Text and figures have been revised and updated throughout - The number of worked examples and end-of-chapter problems has been significantly increased

**Electric Brain Signals** Cambridge University Press

*Heterogeneous Media: Local Fields, Effective Properties, and Wave Propagation* outlines new computational methods for solving volume integral equation problems in heterogeneous media. The book starts by surveying the various numerical methods of analysis of static and dynamic fields in heterogeneous media, listing their strengths and weaknesses, before moving onto an introduction of static and dynamic green functions for homogeneous media. Volume and surface integral equations for fields in heterogeneous media are discussed next, followed by an overview of explicit formulas for numerical calculations of volume and surface potentials. The book then segues into Gaussian functions for discretization of volume integral equations for fields in heterogeneous media, static problems for a homogeneous host medium with heterogeneous inclusions, volume integral equations for scattering problems, and concludes with a chapter outlining solutions to homogenization problems and calculations of effective properties of heterogeneous media. The book concludes with multiple appendices that feature the texts of basic programs for solving volume integral equations as written in Mathematica. - Outlines cutting-edge computational methods for solving volume integral equation problems in heterogeneous media - Provides applied examples of approximation and other methods being employed - Demonstrates calculation of composite material properties and the constitutive laws for averaged fields within them - Covers static and dynamic 2D and 3D mechanical-mathematical models for heterogeneous media

**Heterogeneous Media** Emerald Group Publishing

Since conventional cooling techniques are increasingly falling short of meeting the ever-growing cooling demands of high heat generating devices, thermal systems, and processes, advanced and innovative cooling technologies are of immense importance to deal with such high thermal management. Hence, this book covers a number of key topics related to advanced cooling approaches, their performance, and applications, including: Evaporative air cooling; Spray impingement cooling; Heat pump-based cooling; Modular cooling for photovoltaic plant; Nucleate pool boiling of refrigerants; Transient flashing spray cooling and application; Compressor cooling systems for industry. The book is aimed at a wide variety of people from graduate students and researchers to manufacturers who are involved or interested in the areas of thermal management systems, cooling technologies, and their applications. *N1 Engineering Science* Ram Prasad Publications(R.P.H.)

Working in an interdisciplinary manner is long pursued but a difficult goal of science and mathematics education. The interdisciplinarity of science and mathematics can occur when connections between those disciplines are identified and developed. These connections could be expressed in the educational policies, curriculum, or in the science and mathematics teachers' educational practices. Sometimes those connections are scarce, but in other moments, full integration is achieved. The *Handbook of Research on Interdisciplinarity Between Science and Mathematics in Education* presents results of good practices and interdisciplinary educational approaches in science and mathematics. It presents a broad range of approaches for all educational levels, from kindergarten to university. Covering topics such as computer programming, mathematics in environmental issues, and simple machines, this major reference work is an excellent resource for administrators and educators of both K-12 and higher education, government officials, pre-service teachers, teacher educators, librarians, researchers, and academicians.

**Advanced Cooling Technologies and Applications** CRC Press

Gasification involves the conversion of carbon sources without combustion to syngas, which can be used as a fuel itself or further processed to synthetic fuels. The technology provides a potentially more efficient means of energy generation than direct combustion. This book provides an overview of gasification science and engineering and the production of synthetic fuels by gasification from a variety of feedstocks. Part one introduces gasification, reviewing the scientific basis of the process and gasification engineering. Part two then addresses gasification and synthetic fuel production processes. Finally, chapters in part three outline the different applications of gasification, with chapters on the conversion of different types of feedstock. - Examines the design of gasifiers, the preparation of feedstocks, and the economic, environmental and policy issues related to gasification - Reviews gasification processes for

liquid fuel production - Outlines the different applications of gasification technology

**Advances in Fruit Processing Technologies** Elsevier

*Genetic and Genome-Wide Microbial Insights: Bioenergy: Microbial Genomics (Volume 3)* delves into the cutting-edge developments in the field of metagenomics, encompassing both metatranscriptomics and metaproteomics. This comprehensive resource highlights the significant potential of metagenomics in screening previously uncultivated microbial species. It underscores the pivotal role of these advanced genomic techniques in accessing elusive microorganisms, thereby revolutionizing the production of biofuels. This book emphasizes the practicality of these methods, aiming to make biofuel production more economically feasible and efficient. "Genetic and Genome-Wide Microbial Insights: Bioenergy" offers both a foundational overview and the most recent advancements in microbial genomics, computational genomics, and enzyme engineering. It details the process of upscaling and bio-prospecting microbial strains, specifically tailored for biofuel production, providing a comprehensive guide that bridges basic concepts with cutting-edge research. This book covers a range of topics, including advanced microbial fuel production techniques, Sustainable bioenergy (genomics and biofuel development) and microbial engineering. The comprehensive chapters in this book will appeal to readers from diverse backgrounds in biology, life sciences, agriculture, environmental engineering, genome engineering, and even medicine. - Explores the integration of metagenomics and enzyme engineering in the upscaling of biofuel production - Presents recent 'omics' applications and delves into the biological mechanisms that drive microbial biofuel production - Traces the journey from metagenomics to byproducts, focusing on the bio-prospecting of microbial strains

**Technologies for Biochemical Conversion of Biomass** Springer

*Printing on Polymers: Fundamentals and Applications* is the first authoritative reference covering the most important developments in the field of printing on polymers, their composites, nanocomposites, and gels. The book examines the current state-of-the-art and new challenges in the formulation of inks, surface activation of polymer surfaces, and various methods of printing. The book equips engineers and materials scientists with the tools required to select the correct method, assess the quality of the result, reduce costs, and keep up-to-date with regulations and environmental concerns. Choosing the correct way of decorating a particular polymer is an important part of the production process. Although printing on polymeric substrates can have desired positive effects, there can be problems associated with various decorating techniques. Physical, chemical, and thermal interactions can cause problems, such as cracking, peeling, or dulling. Safety, environmental sustainability, and cost are also significant factors which need to be considered. With contributions from leading researchers from industry, academia, and private research institutions, this book serves as a one-stop reference for this field—from print ink manufacture to polymer surface modification and characterization; and from printing methods to applications and end-of-life issues. - Enables engineers to select the correct decoration method for each material and application, assess print quality, and reduce costs - Increases familiarity with the terminology, tests, processes, techniques, and regulations of printing on plastic, which reduces the risk of adverse reactions, such as cracking, peeling, or dulling of the print - Addresses the issues of environmental impact and cost when printing on polymeric substrates - Features contributions from leading researchers from industry, academia, and private research institutions