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Power Distribution Planning Reference Book, Second Edition H. Lee Willis 2004-03-01 Providing more than twice the content of the original edition, this new edition is the premier source on the selection, development, and provision of safe, high-quality, and cost-effective electric utility distribution systems, and it promises vast improvements in system reliability and layout by spanning every aspect of system planning including load forecasting, scheduling, performance, and economics. Responding to the evolving needs of electric utilities, Power Distribution Planning Reference Book presents an abundance of real-world examples, procedural and managerial issues, and engineering and analytical methodologies that are crucial to efficient and enhanced system performance.

Handbook on Battery Energy Storage System Asian Development Bank 2018-12-01 This handbook serves as a guide to deploying battery energy storage technologies, specifically for distributed energy resources and flexibility resources. Battery energy storage technology is the most promising, rapidly developed technology as it provides higher efficiency and ease of control. With energy transition through decarbonization and decentralization, energy storage plays a significant role to enhance grid efficiency by alleviating volatility from demand and supply. Energy storage also contributes to the grid integration of renewable energy and promotion of microgrid.

Renewable Energy Resources John Twidell 2006 "This second edition maintains the book's basis on fundamentals, whilst including experience gained from the rapid growth of renewable energy technologies as secure national resources and for climate change mitigation, more extensively illustrated with case studies and worked problems. The presentation has been improved throughout, along with a new chapter on economics and institutional factors. Each chapter begins with fundamental theory from a scientific perspective, then considers applied engineering examples and developments, and includes a set of problems and solutions and a bibliography of printed and web-based material for further study. Common symbols and cross referencing apply throughout, essential data are tabulated in appendices. Sections on social and environmental aspects have been added to each technology chapter." -- back cover.

Learning How to Learn Using Multimedia Deepanjali Mishra 2021-08-28 This book introduces the concept of multimedia in education, and how multimedia technology could be implemented to impart digital education to university students. The book emphasizes the versatile use of technology enabled education through the research papers from distinguished academicians and researchers who are specifically working in

this area. It benefits all those researchers who are enthusiastic about learning online and also for those academicians who are interested to work on various aspects of learning and teaching through technology.?

Knowledge-Driven Work Joel Cutcher-Gershenfeld 1998-09-10 Knowledge-Driven Work is a pioneering study of the cross-cultural diffusion of ideas about the organization of work. These ideas, linked with the knowledge of the workforce, are rapidly becoming the primary source of competitive advantage in the world economy. The book provides an in-depth look at eight Japanese-affiliated manufacturing facilities operating in the United States, combined with examinations of their sister facilities in Japan. The authors offer their insights into the complex process by which elements of work systems in one country interact with those in another. They trace the flow of ideas from Japan to the US and other nations, and the beginnings of a reverse diffusion of innovation back to Japan. The authors organize their findings into six categories: the cross-cultural diffusion of work practices, team-based work systems, kaizen and employee involvement, employment security, human resource management, and labor-management relations. Their study of team-based work systems yields a taxonomy of teams and reveals some conflicts between the desire for self-management and the existence of interdependencies. Investigations into kaizen (ongoing incremental improvement) indicate that its emphasis on employee-driven, systematic problem solving makes it a strong counterpoint to the idea of top-down "re-engineering." Looking at employment security, the authors note that while most US managers believe that it restrains managerial flexibility, managers at the firms they observed see it as essential to the flexibility associated with teamwork and kaizen. The study of human resource management practices suggests competitive advantages in diverse, older, unionized, and urban work forces, and emphasizes the importance of wide-ranging training programs in a work system premised on a long-term perspective. The "wildcard" in the work places observed is labor-management relations, the area in which Japanese managers have been least likely to import their ideas. The authors report on several situations in which existing labor-management structures remained untouched, with mixed results: greater labor-management consultation, for example, but also increased ambiguity of roles. The thread running through all of these areas of work is "virtual knowledge," an ephemeral form of knowledge derived from a particular combination of people focused on a given issue. The authors point out that this powerful form of knowledge is only effectively harnessed in environments that are free of fear, that have established procedures for collective problem-solving, and that have some stability in group composition. They claim that too often companies allow virtual knowledge to dissipate, squandering opportunities to create more competitive workplaces. For those organizations that have succeeded in anticipating and channeling it, however, virtual knowledge leads to a knowledge-driven workplace and continuous improvement.

Concepts Of Physics Harish Chandra Verma 1999

The City Reader Richard T. LeGates 2015-07-16 The sixth edition of the highly successful *The City Reader* juxtaposes the very best classic and contemporary writings on the city to provide the comprehensive mapping of the terrain of Urban Studies and Planning old and new. *The City Reader* is the anchor volume in the Routledge Urban Reader Series and is now integrated with all ten other titles in the series. This edition has been extensively updated and expanded to reflect the latest thinking in each of the disciplinary areas included and in topical areas such as compact cities, urban history, place making, sustainable urban development, globalization, cities and climate change, the world city network, the impact of technology on cities, resilient cities, cities in Africa and the Middle East, and urban theory. The new edition places greater emphasis on cities in the developing world, globalization and the global city system of the future. The plate sections have been revised and updated. Sixty generous selections are included: forty-four from the fifth edition, and sixteen new selections, including three newly written exclusively for *The City Reader*. The sixth edition keeps classic writings by authors such as Ebenezer Howard, Ernest W. Burgess, LeCorbusier, Lewis Mumford,

Jane Jacobs, and Louis Wirth, as well as the best contemporary writings of, among others, Peter Hall, Manuel Castells, David Harvey, Saskia Sassen, and Kenneth Jackson. In addition to newly commissioned selections by Yasser Elshestawy, Peter Taylor, and Lawrence Vale, new selections in the sixth edition include writings by Aristotle, Peter Calthorpe, Alberto Camarillo, Filip DeBoech, Edward Glaeser, David Owen, Henri Pirenne, The Project for Public Spaces, Jonas Rabinovich and Joseph Lietman, Doug Saunders, and Bish Sanyal. The anthology features general and section introductions as well as individual introductions to the selected articles introducing the authors, providing context, relating the selection to other selection, and providing a bibliography for further study. The sixth edition includes fifty plates in four plate sections, substantially revised from the fifth edition.

Open educational resources: policy, costs, transformation Miao, Fengchun 2016-04-18

Wheeled Mobile Robotics Gregor Klančar 2017-02-02 Wheeled Mobile Robotics: From Fundamentals Towards Autonomous Systems covers the main topics from the wide area of mobile robotics, explaining all applied theory and application. The book gives the reader a good foundation, enabling them to continue to more advanced topics. Several examples are included for better understanding, many of them accompanied by short MATLAB® script code making it easy to reuse in practical work. The book includes several examples of discussed methods and projects for wheeled mobile robots and some advanced methods for their control and localization. It is an ideal resource for those seeking an understanding of robotics, mechanics, and control, and for engineers and researchers in industrial and other specialized research institutions in the field of wheeled mobile robotics. Beginners with basic math knowledge will benefit from the examples, and engineers with an understanding of basic system theory and control will find it easy to follow the more demanding fundamental parts and advanced methods explained. Offers comprehensive coverage of the essentials of the field that are suitable for both academics and practitioners Includes several examples of the application of algorithms in simulations and real laboratory projects Presents foundation in mobile robotics theory before continuing with more advanced topics Self-sufficient to beginner readers, covering all important topics in the mobile robotics field Contains specific topics on modeling, control, sensing, path planning, localization, design architectures, and multi-agent systems

Smart Universities Vladimir L. Uskov 2017-05-18 This book presents peer-reviewed contributions on smart universities by various international research, design and development teams. Smart university is an emerging and rapidly evolving area that creatively integrates innovative concepts; smart software and hardware systems; smart classrooms with state-of-the-art technologies and technical platforms; smart pedagogy based on modern teaching and learning strategies; smart learning and academic analytics; as well as various branches of computer science and computer engineering. The contributions are grouped into several parts: Part 1—Smart Universities: Literature Review and Creative Analysis, Part 2—Smart Universities: Concepts, Systems and Technologies, Part 3—Smart Education: Approaches and Best Practices, and Part 4—Smart Universities: Smart Long Life Learning. The book is a valuable source of research data and findings, design and development outcomes, and best practices for faculty, scholars, Ph.D students, administrators, practitioners and anyone interested in the rapidly growing areas of smart university and smart education.

Globalization and Its Discontents Joseph E. Stiglitz 2003-04-17 This powerful, unsettling book gives us a rare glimpse behind the closed doors of global financial institutions by the winner of the 2001 Nobel Prize in Economics. When it was first published, this national bestseller quickly became a touchstone in the globalization debate. Renowned economist and Nobel Prize winner Joseph E. Stiglitz had a ringside seat for most of the major economic events of the last decade, including stints as chairman of the Council of Economic Advisers and chief economist at the World Bank. Particularly concerned with the plight of the developing nations, he became increasingly disillusioned as he saw the International

Monetary Fund and other major institutions put the interests of Wall Street and the financial community ahead of the poorer nations. Those seeking to understand why globalization has engendered the hostility of protesters in Seattle and Genoa will find the reasons here. While this book includes no simple formula on how to make globalization work, Stiglitz provides a reform agenda that will provoke debate for years to come. Rarely do we get such an insider's analysis of the major institutions of globalization as in this penetrating book. With a new foreword for this paperback edition.

Engineering Applications of Composites Bryan R. Noton 2016-06-15 Composite Materials, Volume 3: Engineering Applications of Composites covers a variety of applications of both low- and high-cost composite materials in a number of business sectors, including material systems used in the electrical and nuclear industries. The book discusses the utilization of carbon-fiber reinforced plastics for a number of high-volume products; applications in road transportation; and the application of composite materials to civil aircraft structures. The text also describes the engineering considerations that enter into the selection and application of materials, as well as the composite applications in existing spacecraft hardware and includes projected applications for space vehicles and systems. The application of materials to military aircraft structure; the components applicable to personal and mass-transit vehicles; and composites in the ocean engineering industry are also considered. The book further tackles composite materials or composite structures principally found in buildings; composite uses in the chemical industries; and examples of fiber-glass-reinforced plastic components in key end-product markets. The text also looks into the most commonly employed molding techniques, mechanical and physical properties of various fiber glass-reinforced thermosets and thermoplastics, the resins and fiber-glass reinforcements available, and code information. The chemical, physical, and mechanical properties and application information about composites in the electrical and nuclear industries; and the potential high-volume applications of advanced composites are also encompassed. Engineers and people involved in the development of composite materials will find the book invaluable.

Evolutionary Computing and Mobile Sustainable Networks V. Suma 2020-07-31 This book features selected research papers presented at the International Conference on Evolutionary Computing and Mobile Sustainable Networks (ICECMSN 2020), held at the Sir M. Visvesvaraya Institute of Technology on 20–21 February 2020. Discussing advances in evolutionary computing technologies, including swarm intelligence algorithms and other evolutionary algorithm paradigms which are emerging as widely accepted descriptors for mobile sustainable networks virtualization, optimization and automation, this book is a valuable resource for researchers in the field of evolutionary computing and mobile sustainable networks.

Learning How to Learn Barbara Oakley, PhD 2018-08-07 A surprisingly simple way for students to master any subject--based on one of the world's most popular online courses and the bestselling book A Mind for Numbers A Mind for Numbers and its wildly popular online companion course "Learning How to Learn" have empowered more than two million learners of all ages from around the world to master subjects that they once struggled with. Fans often wish they'd discovered these learning strategies earlier and ask how they can help their kids master these skills as well. Now in this new book for kids and teens, the authors reveal how to make the most of time spent studying. We all have the tools to learn what might not seem to come naturally to us at first--the secret is to understand how the brain works so we can unlock its power. This book explains: Why sometimes letting your mind wander is an important part of the learning process How to avoid "rut think" in order to think outside the box Why having a poor memory can be a good thing The value of metaphors in developing understanding A simple, yet powerful, way to stop procrastinating Filled with illustrations, application questions, and exercises, this book makes learning easy and fun.

Guidelines on the development of open educational resources policies

Miao, Fengchun 2019-10-15

Integration of Distributed Generation in the Power System Math H. J. Bollen 2011-08-04 The integration of new sources of energy like wind power, solar-power, small-scale generation, or combined heat and power in the power grid is something that impacts a lot of stakeholders: network companies (both distribution and transmission), the owners and operators of the DG units, other end-users of the power grid (including normal consumers like you and me) and not in the least policy makers and regulators. There is a lot of misunderstanding about the impact of DG on the power grid, with one side (including mainly some but certainly not all, network companies) claiming that the lights will go out soon, whereas the other side (including some DG operators and large parts of the general public) claiming that there is nothing to worry about and that it's all a conspiracy of the large production companies that want to protect their own interests and keep the electricity price high. The authors are of the strong opinion that this is NOT the way one should approach such an important subject as the integration of new, more environmentally friendly, sources of energy in the power grid. With this book the authors aim to bring some clarity to the debate allowing all stakeholders together to move to a solution. This book will introduce systematic and transparent methods for quantifying the impact of DG on the power grid.

Advances in Architecture, Engineering and Technology Federica Rosso 2022

International Conference on Computer Networks and Communication Technologies S. Smys 2019 The book features research papers presented at the International Conference on Computer Networks and Inventive Communication Technologies (ICCNCT 2018), offering significant contributions from researchers and practitioners in academia and industry. The topics covered include computer networks, network protocols and wireless networks, data communication technologies, and network security. Covering the main core and specialized issues in the areas of next-generation wireless network design, control, and management, as well as in the areas of protection, assurance, and trust in information security practices, these proceedings are a valuable resource, for researchers, instructors, students, scientists, engineers, managers, and industry practitioners. .

Internet of Things and Analytics for Agriculture, Volume 3 Prasant Kumar Pattnaik 2021-11-10 The book discusses one of the major challenges in agriculture which is delivery of cultivate produce to the end consumers with best possible price and quality. Currently all over the world, it is found that around 50% of the farm produce never reaches the end consumer due to wastage and suboptimal prices. The authors present solutions to reduce the transport cost, predictability of prices on the past data analytics and the current market conditions, and number of middle hops and agents between the farmer and the end consumer using IoT-based solutions. Again, the demand by consumption of agricultural products could be predicted quantitatively; however, the variation of harvest and production by the change of farm's cultivated area, weather change, disease and insect damage, etc., could be difficult to be predicted, so that the supply and demand of agricultural products has not been controlled properly. To overcome, this edited book designed the IoT-based monitoring system to analyze crop environment and the method to improve the efficiency of decision making by analyzing harvest statistics. The book is also useful for academicians working in the areas of climate changes.

Sustainable Industrial Design and Waste Management Salah El Haggag 2010-07-28 Sustainable Industrial Design and Waste Management was inspired by the need to have a text that enveloped awareness and solutions to the ongoing issues and concerns of waste generated from industry. The development of science and technology has increased human capacity to extract resources from nature and it is only recently that industries are being held accountable for the detrimental effects the waste they produce has on the environment. Increased governmental

research, regulation and corporate accountability are digging up issues pertaining to pollution control and waste treatment and environmental protection. The traditional approach for clinical waste, agricultural waste, industrial waste, and municipal waste are depleting our natural resources. The main objective of this book is to conserve the natural resources by approaching 100 % full utilization of all types of wastes by cradle – to – cradle concepts, using Industrial Ecology methodology documented with case studies. Sustainable development and environmental protection cannot be achieved without establishing the concept of industrial ecology. The main tools necessary for establishing Industrial Ecology and sustainable development will be covered in the book. The concept of “industrial ecology will help the industrial system to be managed and operated more or less like a natural ecosystem hence causing as less damage as possible to the surrounding environment. Numerous case studies allow the reader to adapt concepts according to personal interest/field Reveals innovative technologies for the conservation of natural resources The only book which provides an integrated approach for sustainable development including tools, methodology, and indicators for sustainable development

Unmanned Aerial Vehicle: Applications in Agriculture and Environment Ram Avtar 2019-11-18 This book showcases how new and emerging technologies like Unmanned Aerial Vehicles (UAVs) are trying to provide solutions to unresolved socio-economic and environmental problems. Unmanned vehicles can be classified into five different types according to their operation. These five types are unmanned ground vehicles, unmanned aerial vehicles, unmanned surface vehicles (operating on the surface of the water), unmanned underwater vehicles, and unmanned spacecraft. Unmanned vehicles can be guided remotely or function as autonomous vehicles. The technology has a wide range of uses including agriculture, industry, transport, communication, surveillance and environment applications. UAVs are widely used in precision agriculture; from monitoring the crops to crop damage assessment. This book explains the different methods in which they are used, providing step-by-step image processing and sample data. It also discusses how smart UAVs will provide unique opportunities for manufacturers to utilise new technological trends to overcome the current challenges of UAV applications. The book will be of great interest to researchers engaged in forest carbon measurement, road patrolling, plantation monitoring, crop yield estimation, crop damage assessment, terrain modelling, fertilizer control, and pest control.

Advances in Manufacturing and Industrial Engineering Ranganath M. Singari 2021-01-13 This book presents selected peer reviewed papers from the International Conference on Advanced Production and Industrial Engineering (ICAPIE 2019). It covers a wide range of topics and latest research in mechanical systems engineering, materials engineering, micro-machining, renewable energy, industrial and production engineering, and additive manufacturing. Given the range of topics discussed, this book will be useful for students and researchers primarily working in mechanical and industrial engineering, and energy technologies.

Septage Management Joseph W. Rezek 1980

Electric Power Distribution System Engineering, Second Edition Turan Gonen 2007-12-14 A quick scan of any bookstore, library, or online bookseller will produce a multitude of books covering power systems. However, few, if any, are totally devoted to power distribution engineering, and none of them are true textbooks. Filling this vacuum in the power system engineering literature, the first edition of Electric Power Distribution System Engineering broke new ground. Written in the classic, self-learning style of the first edition, this second edition contains updated coverage, new examples, and numerous examples of MATLAB applications. Designed specifically for junior- or senior-level electrical engineering courses, the author draws on his more than 31 years of experience to provide a text that is as attractive to students as it is useful to professors and practicing engineers. The book covers all aspects of distribution engineering from basic system planning and

concepts through distribution system protection and reliability. The author brings to the table years of experience and, using this as a foundation, demonstrates how to design, analyze, and perform modern distribution system engineering. He takes special care to cover industry terms and symbols, providing a glossary and clearly defining each term when it is introduced. The discussion of distribution planning and design considerations goes beyond the usual analytical and qualitative analysis and emphasizes the economical explication and overall impact of the distribution design considerations discussed. See what's new in the Second Edition: Topics such as automation of distribution systems, advanced SCADA systems, computer applications, substation grounding, lightning protection, and insulators Chapter on electric power quality New examples and MATLAB applications Substation grounding Lightning protection Insulators Expanded topics include: Load forecasting techniques High-impedance faults A detailed review of distribution reliability indices Watch Turan Gonen talk about his book at: <http://youtu.be/OZBd2diBzgk>

Managing Urbanization, Climate Change and Disasters in South Asia Ravindra Kumar Srivastava 2020-07-20 This book offers essential insights into potential catastrophic events that might befall upon the emerging urban landscape in South Asia, and which are due to hazards, risks and vulnerabilities inherent in the region's geophysical location, as well as due to climate change and unplanned urbanization. It highlights major physio-graphic, demographic, geological and geophysical indicators that are responsible for changing the pattern and trend of urbanization in South Asia – a crucial issue in view of emerging threats of climate change, and changes in the demographic profile. The book addresses the disaster management scenario in South Asia, manifestations of climate change in the region and various urban setups under climate-change-induced risks. Further, it elaborates on the challenges of urbanization-based neo-risks and vulnerabilities, which manifest in the form of slum area growth, piling and littering of waste and filth, new health risks, groundwater contamination, air pollution, highly energy-dependent lifestyles, poverty, socio-economic tensions, etc. It also critically examines the institutional mechanisms for disaster risk reduction (DRR), climate change adaptation (CCA) and urban governance, and suggests appropriate changes in the governing structure to mitigate these risks. The book draws the attention of urban planners and policymakers to current shortcomings in the administrative and financial structures of local urban bodies. While outlining climate-associated risks and adaptation strategies in South Asia, it also suggests measures for integrating climate change and urban adaption with state's planning processes, and puts forward a risk alleviation platform to bring the risk managers working in different fields together, so that they make concerted efforts to achieve sustainable development. It offers valuable takeaways for researchers, urban planners, those working in industry, consultants, and policymakers.

Innovative Data Communication Technologies and Application Jennifer S. Raj 2022-02-17 This book presents the latest research in the fields of computational intelligence, ubiquitous computing models, communication intelligence, communication security, machine learning, informatics, mobile computing, cloud computing and big data analytics. The best selected papers, presented at the International Conference on Innovative Data Communication Technologies and Application (ICIDCA 2020), are included in the book. The book focuses on the theory, design, analysis, implementation and applications of distributed systems and networks.

Sustainable Urban Transport Maria Attard 2015-05-14 This publication brings together an international group of researchers and presents work from different countries dealing with issues related to transport policy, attitudes and mode choice, car sharing and alternative modes of transport, and discusses the future of non-motorized modes of transport.

Urban Hydrology, Watershed Management and Socio-Economic Aspects Arup K. Sarma 2016-10-25 The book brings together high-quality research articles on advanced hydrological analysis, advanced computational methods, and the ecological and sociological aspects of urban

watershed management under one umbrella. The rapid pace of urbanization, not accompanied by any farsighted, holistic plan, has reduced many cities in the developing world into multi-hazard areas. The most perceptible consequence of urbanization is the change in land-use and land cover, which in turn impacts hydrological systems. Accordingly, scientific studies on urban hydrology with due emphasis on ecological and sociological aspects under changing climate are vital to the appropriate design of urban landscapes and civil infrastructure works. This book addresses precisely these issues, offering a useful guide for environmentalists, hydrologists, and a broad range of socio-economic scientists exploring the environmental vulnerabilities arising from urbanization.

Urban Ecology, Water Quality and Climate Change Arup K. Sarma 2018-03-14 This unique book brings together high-quality research contributions on ecological aspects of urbanization, water quality concerns in an urban environment, and climate change issues with a strong Indian focus under one umbrella. It includes several case studies that discuss urban water management, particularly highlighting the quality aspects. Urbanization is an ecological disturbance that the modern world accepts as essential in the absence of a better alternative that could provide an equal level of comfort. The prohibitive costs of eco-friendly production technologies are forcing the developing world to generate industrial waste that is detrimental to the environment. At the same time, the availability of adequate fresh water is another challenge for our climate-change impacted world. The scientific community is, therefore, searching for ways towards ecologically sustainable urban development. Discussing all these issues, this book offers a useful guide for academicians, researchers, practicing engineers, and managers dealing with diverse water-related problems in urban areas.

The Shadow Lines Amitav Ghosh 2010-01-26 Opening in Calcutta in the 1960s, Amitav Ghosh's radiant second novel follows two families -- one English, one Bengali -- as their lives intertwine in tragic and comic ways. The narrator, Indian born and English educated, traces events back and forth in time, from the outbreak of World War II to the late twentieth century, through years of Bengali partition and violence, observing the ways in which political events invade private lives.

Krishi-Parashara Par??ara 1999 Ancient Sanskrit text with English translation on trees and plants.

Wind Power Generation and Wind Turbine Design Wei Tong 2010-04-30 The purpose of this book is to provide engineers and researchers in both the wind power industry and energy research community with comprehensive, up-to-date, and advanced design techniques and practical approaches. The topics addressed in this book involve the major concerns in the wind power generation and wind turbine design.

Ninety Percent of Everything Rose George 2013-08-13 Revealing the workings and dangers of freight shipping, which is the key to our economy, environment and civilization, the author sails from Rotterdam to Suez to Singapore to present an eye-opening glimpse into an overlooked world filled with suspect practices, dubious operators and pirates.

Solar Photovoltaics CHETAN SINGH SOLANKI 2015-05-09 This thoroughly revised text, now in its third edition, continues to provide a detailed discussion on all the aspects of solar photovoltaic (PV) technologies from physics of solar cells to manufacturing technologies, solar PV system design and their applications. The Third Edition includes a new chapter on "Advances in c-Si Cell Processes Suitable for Near Future Commercialization" (Chapter 8) to introduce the technological advancement in the commercial production to keep the readers up to date. Organized in three parts, Part I introduces the fundamental principles of solar cell operation and design, Part II explains various technologies to fabricate solar cells and PV modules and Part III focuses on the use of solar photovoltaics as part of the system for providing electrical energy. In addition to this, numerous chapter-end exercises are given to reinforce the understanding of the subject. The text is intended for the undergraduate and postgraduate students of engineering for their courses on solar photovoltaic technologies and renewable energy

technologies. The book is of immense use for teachers, researchers and professionals working in the photovoltaic field. In a nutshell, this book is an absolute must-read for all those who want to understand and apply the basics behind photovoltaic devices and systems.

Encyclopedia of Smart Materials, 2 Volume Set Mel M. Schwartz 2002-03-22 Smart materials--materials and structures that can impart information about their environment to an observer or monitoring device--are revolutionizing fields as diverse as engineering, optics, and medical technology. Advances in smart materials are impacting disciplines across the scientific and technological landscape. Now, practitioners and researchers have an authoritative source to go to for answers about this emerging new area. Encyclopedia of Smart Materials provides A-to-Z coverage of the entire field of intelligent materials. Discussions of theory, fabrication, processing, applications, and uses of these unique materials are presented here in a collection of concise entries from the world's foremost experts in the field--including scientists, educators and engineers. This encyclopedia is as broad in scope as the technology itself, addressing daily, commercial applications as well as sophisticated units designed to operate in space, underwater, underground, and within the human body. Extensively cross-referenced and generously supplemented with bibliographies and indexes, this book's treatment also broaches the specialized properties and coatings that are required for the use of materials in extreme conditions. Illustrated with photographs, tables, line drawings, and equations, Encyclopedia of Smart Materials is the premier reference for material scientists, chemists, chemical engineers, process engineers, consultants, patent attorneys and students in these areas. An essential resource on the shelves of laboratories, government facilities, and academic libraries. Editor-in-Chief, Mel Schwartz has over forty years of experience with metals, ceramics, and composites, with special expertise in brazing. The holder of five patents, he has authored thirteen books and more than one hundred technical papers and articles. Reach the information you need rapidly and easily with the ONLINE edition of the Encyclopedia of Smart Materials. The online edition delivers all the rich content of the print edition with the added benefits of an advanced search engine and the desktop convenience of web access. For more information or to license the online edition (beginning July 2002) please visit: www.interscience.wiley.com/reference/esm

The Fortune at the Bottom of the Pyramid C. K. Prahalad 2006 The world's most exciting, fastest-growing new market is where you least expect it: at the bottom of the pyramid. Collectively, the world's billions of poor people have immense untapped buying power. They represent an enormous opportunity for companies who learn how to serve them. Not only can it be done, it is being done--very profitably. What's more, companies aren't just making money: by serving these markets, they're helping millions of the world's poorest people escape poverty. C.K. Prahalad's global bestseller "The Fortune at the Bottom of the Pyramid," now available in paperback, "shows why you can't afford to ignore "Bottom of the Pyramid" (BOP) markets. Now available in paperback, it offers a blueprint for driving the radical innovation you'll need to profit in emerging markets--and using those innovations to become more competitive "everywhere." This new paperback edition includes eleven concise, fast-paced success stories from India, Peru, Mexico, Brazil, and Venezuela--ranging from salt to soap, banking to cellphones, healthcare to housing. These stories are backed by more detailed case studies and 10 hours of digital videos on whartonsp.com. Simply put, this book is about making a revolution: building profitable "bottom of the pyramid" markets, reducing poverty, and creating an inclusive capitalism that works for "everyone." Preface xi About the Author xix Part I: The Fortune at the Bottom of the Pyramid 1 Chapter 1: The Market at the Bottom of the Pyramid 3 Chapter 2: Products and Services for the BOP 23 Chapter 3: BOP: A Global Opportunity? 47 Chapter 4: The Ecosystem for Wealth Creation 63 Chapter 5: Reducing Corruption: Transaction Governance Capacity 77 Chapter 6: Development as Social Transformation 99 Part II: Business Success Stories from the Bottom of the Pyramid 113 Financing the Poor 115 Aravind Eye Care-The Most Precious Gift 131 Energy for Everyone 137 Agricultural Advances for the Poor-The EID Parry Story 149 Retail for the Poor 159 Information

Technology to the Poor 169 The Jaipur Foot Story 187 Health Alerts for All 191 Transparent Government 201 The Annapurna Salt Story 213 Homes for the Poor-The CEMEX Story 221 From Hand to Mouth-The HHL Soap Story 235 Part III: On the Web at Whartonsp.com Video Success Stories Casas Bahia CEMEX Annapurna Salt Hindustan Lever Jaipur Foot Aravind Eye Care ICICI Bank ITC e-Choupal EID Parry Voxiva E+Co/Tecnosol Andhra Pradesh Full Success Case Stories in pdf format The Market at the Bottom of the Pyramid Known Problems and Known Solutions: What Is the Missing Link? Known Problems and Unique Solutions Known Problems and Systemwide Reform Scaling Innovations Creating Enabling Conditions for the Development of the Private Sector The EID Parry Story Biographies of the Researchers/Writers of the Success Case Stories from "The Fortune at the Bottom of the Pyramid" 247 About the Video Success Stories 255 Index 257

Research and Technology Management in the Electricity Industry Tugrul Daim 2013-06-25 Technologies such as renewable energy alternatives including wind, solar and biomass, storage technologies and electric engines are creating a different landscape for the electricity industry. Using sources and ideas from technologies such as renewable energy alternatives, Research and Technology Management in the Electricity Industry explores a different landscape for this industry and applies it to the electric industry supported by real industry cases. Divided into three sections, Research and Technology Management in the Electricity Industry introduces a range of methods and tools including technology assessment, forecasting, roadmapping, research and development portfolio management and technology transfer. These tools are applied to emerging technologies in this industry with case studies including data from various organizations including Bonneville Power Administration and Energy Trust of Oregon, from sectors including lighting and wind energy. The final section considers innovation through these technologies. A product result of a collaboration between Bonneville Power Administration and Portland State University, Research and Technology Management in the Electricity Industry is a comprehensive collection of methods, tools, examples and pathways for future innovation in the electricity industry.

Sustainable Geotechnics Slobodan B Mickovski 2021-08-30 Today, modern Geotechnical Engineers, who in the past would have considered the phenomena occurring in the (primarily soil) environment, are faced with developments in environmental sciences that are becoming increasingly more detailed and sophisticated, with the natural phenomena and processes surrounding the civil engineering infrastructure being modeled, designed, monitored, and assessed in a more holistic way. This book brings together the state of the art in geotechnics with a focus on sustainable design, resilience, construction, and monitoring of the performance of geotechnical assets from ground investigations, through foundation and drainage design to soil stabilization and reinforcement. Engineers and scientists working in the fields of green infrastructure, nature-based solutions, sustainable drainage, eco-engineering, hydro-geology, landscape planning, plant science, environmental biology or bio-chemistry, earth sciences, GIS, and remote sensing are represented here by articles that show significant geotechnical components or applications. Case studies showcasing the application of the sustainable development principles (e.g., reuse, recycle, reduce; stakeholder engagement; public health; UN Global Sustainability Goals) in Geotechnics are also included in this book.

Software-Defined Radio for Engineers Alexander M. Wyglinski 2018-04-30 Based on the popular Artech House classic, Digital Communication Systems Engineering with Software-Defined Radio, this book provides a practical approach to quickly learning the software-defined radio (SDR) concepts needed for work in the field. This up-to-date volume guides readers on how to quickly prototype wireless designs using SDR for real-world testing and experimentation. This book explores advanced wireless communication techniques such as OFDM, LTE, WLA, and hardware targeting. Readers will gain an understanding of the core concepts behind wireless hardware, such as the radio frequency front-end, analog-to-

digital and digital-to-analog converters, as well as various processing technologies. Moreover, this volume includes chapters on timing estimation, matched filtering, frame synchronization message decoding, and source coding. The orthogonal frequency division multiplexing is explained and details about HDL code generation and deployment are provided. The book concludes with coverage of the WLAN toolbox with OFDM beacon reception and the LTE toolbox with downlink reception. Multiple case studies are provided throughout the book. Both MATLAB and Simulink source code are included to assist readers with their projects in the field.

Engineering Economic Analysis Donald G. Newnan 2018-02-05 Praised for its accessible tone and extensive problem sets, this trusted text familiarizes students with the universal principles of engineering economics. This essential introduction features a wealth of specific Canadian examples and has been fully updated with new coverage of inflation and environmental stewardship as well as a new chapter on project management.