Chapter 2 Solutions Pradeep

The recent introduction of nanomedicines in the drug therapy arena is revolutionizing the management of severe diseases. The key advance in the field is the optimization of the biological fate of drug molecules, thus improving the therapeutic effect while keeping to a very minimum the associated toxicity. Volume one of this book series, Nanoplatforms in Drug Delivery, established the basic aspects in the development of drug-loaded nanoplatforms, the so-called nanomedicines or nanodrugs, focusing on representative materials and strategies used in their formulation. Taking advantage of the advanced conceptualizations on nanomedicine engineering that were described in volume one, volume two, Nano-Engineering Strategies and Nanomedicines against Severe Diseases, analyzes in depth special features related to the formulation of nanoplatforms for oral, dental, topical and transdermal, pulmonary and nasal, ocular and otic, vaginal, and brain drug delivery and targeting. Particular aspects of nanomedicine engineering and in vivo fate associated with the routing of drug administration are given special attention. In addition, an up-to-date view is presented on the use of nanomedicines against severe diseases, such as cancer, cardiovascular diseases, neurodegenerative disorders, infectious diseases, chronic inflammatory diseases, and metabolic diseases. The chapters analyze the key factors that need to be controlled to achieve the optimum therapeutic effect. Attention is further given to gene delivery and the recent concept of nanotheranosis.

This IBM® RedpaperTM publication illustrates how the IBM WebSphere DataPower Integration Appliance XI50 for zEnterprise provides a secure, fast, cost-effective, easy-to-manage, all-in-one enterprise application integration solution. On top of all the benefits that the DataPower XI50 and XI52 already provide, incorporating the DataPower XI50z into zEnterprise also provides a number of additional benefits: - Exploitation of the high-speed intraensemble data network (IEDN) connecting the zEnterprise Blade Extension (zBX) with the zEnterprise central processor complex (CPC), either a zEnterprise 196 (z196) or zEnterprise 114 (z114) - Secure incorporation of the DataPower XI50z appliance into a virtual local area network (VLAN) on the zBX - Unified management of the DataPower XI50z, along with other blades and optimizers using a common management tool - A centralized computing model, resulting in more efficient use of floor space, lower energy costs, and a lower total cost of ownership (TCO) The DataPower XI50z provides a variety of powerful integration scenarios specifically for older mainframe applications, making it a natural choice to include the appliance in your centralized zEnterprise server. This publication is intended for potential and actual users of the DataPower XI50z.

The Indian Ocean Region (IOR) is of immense strategic significance on the global maritime map – not just on account of its centrality to the current trade and energy flows, but also because of the extreme disparities and inherent volatility of

the region. The region faces an array of security challenges, both traditional and non-traditional. These include security of SLOCs, the problem of piracy, the possibility of renewed terrorism at and from the sea and the pervasive smuggling of people, narcotics and arms. The narrative of regional maritime security is also characterized by oscillating economic growth, growing military presence and a rapidly deteriorating ecological balance in the Indian Ocean. A stand-out feature of the IOR is the lack of correspondence between nations on issues concerning 'security'. While using the high seas for trade, transportation of energy, major powers have tended to neglect the impact of the economic activities on the sea itself. In contrast, smaller regional countries and island states with developing economies have, at best, been able to use only those resources of the sea which are vital to their survival. As the challenges rise, the need to factor in and secure effective management of the Indian Ocean has turned into a compelling imperative. While governments and authorities grapple with complex issues trying to forge a coherent maritime policy, there is a growing recognition that unless solutions are found quickly, lives, livelihoods, and in some cases the very future of local populations could be at risk. This book contains a comprehensive overview of perspectives of some of the stakeholders in the Indian Ocean Region. It seeks to identify the key maritime security issues and explores the potential contribution of the stakeholders in meeting these challenges.

The second edition of this book is a response to the fact that today BAs are expected to not merely help in gathering requirement for software, but solve real-world business problems, act as design thinkers and innovators, architects, drive process, and business transformation, and become 'trusted advisors' to managements—while leveraging their core strength in Information Technology. If the earlier edition was the first book on the subject—this edition takes the subject to the next level by preparing a BA to become a design thinker! An architect/design thinker usually views any problem from multiple perspectives. This edition, has therefore, been structured such that most of the chapters represent a distinct view-point about a problem space, business area or a process. Divided into five sections, the book delves onto three important aspects of Business Analysis—Processes, Information and Systems. The external enterprise context, competitiveness and strategy; internal enterprise context; flow perspective; information perspective; decision/business rules perspective; dynamic perspective; innovation and human perspective and technology perspective are some of the key view-points described in the chapters. Each of these perspectives are covered by way of conceptual framework, real-life illustrations and practical tips for a BA. With the help of a comprehensive cases, this edition guides the BA to synthesize these discrete perspectives, and propose meaningful solutions to the organization. In doing this, the book also explains the core artifacts which a BA produces, viz. Requirements Documents, Estimation and Business Cases. The book is designed for the aspiring Business Analysts and IT Managers/CIOs. Besides, the book will be equally beneficial for the

students opting for the courses on MIS, Systems Analysis and Design, MBA, MCA and Business Process Analysis.

An interdisciplinary guide to enabling technologies for 3D ICs and 5G mobility, covering packaging, design to product life and reliability assessments Features an interdisciplinary approach to the enabling technologies and hardware for 3D ICs and 5G mobility Presents statistical treatments and examples with tools that are easily accessible, such as Microsoft's Excel and Minitab Fundamental design topics such as electromagnetic design for logic and RF/passives centric circuits are explained in detail Provides chapter-wise review questions and powerpoint slides as teaching tools

Nanotechnology is already having a dramatic impact on improving water quality and the second edition of Nanotechnology Applications for Clean Water highlights both the challenges and the opportunities for nanotechnology to positively influence this area of environmental protection. This book presents detailed information on cutting-edge technologies, current research, and trends that may impact the success and uptake of the applications. Recent advances show that many of the current problems with water quality can be addressed using nanosorbents, nanocatalysts, bioactive nanoparticles, nanostructured catalytic membranes, and nanoparticle enhanced filtration. The book describes these technologies in detail and demonstrates how they can provide clean drinking water in both large scale water treatment plants and in point-of-use systems. In addition, the book addresses the societal factors that may affect widespread acceptance of the applications. Sections are also featured on carbon nanotube arrays and graphene-based sensors for contaminant sensing, nanostructured membranes for water purification, and multifunctional materials in carbon microspheres for the remediation of chlorinated hydrocarbons. Addresses both the technological aspects of delivering clean water supplies and the societal implications that affect take-up Details how the technologies are applied in large-scale water treatment plants and in point-of-use systems Highlights challenges and the opportunities for nanotechnology to positively influence this area of environmental protection

The book starts with an overview of the role of cities in climate change and environmental pollution worldwide, followed by the concept description of smart cities and their expected features, focusing on green technology innovation. This book explores the energy management strategies required to minimize the need for huge investments in high-capacity transmission lines from distant power plants. A new range of renewable energy technologies modified for installation in cities like small wind turbines, micro-CHP and heat pumps are described. The overall objective of this book is to explore all the green and smart technologies for designing green smart cities.

Adsorption: Fundamental Processes and Applications, Volume 33 in the Interface Science and Technology Series, discusses the great technological importance of adsorption and describes how adsorbents are used on a large scale as

desiccants, catalysts, catalyst supports, in the separation of gases, the purification of liquids, pollution control, and in respiratory protection. Finally, it explores how adsorption phenomena play a vital role in many solid-state reactions and biological mechanisms, as well as stressing the importance of the widespread use of adsorption techniques in the characterization of surface properties and the texture of fine powders. Covers the fundamental aspects of adsorption process engineering Reviews the environmental impact of key aquatic pollutants Discusses and analyzes the importance of adsorption processes for water treatment Highlights opportunity areas for adsorption process intensification Edited by a world-leading researcher in interface science

The progressive combination of cloud computing and Internet of Things (IoT) will enable new monitoring services, create powerful processing of sensory data streams, and provide a new method for intelligent perception and connection. Examining Cloud Computing Technologies Through the Internet of Things is a pivotal reference source for scholarly research on the latest and innovative facets of cloud-based Internet of Things systems including technical evaluations and comparisons of existing concepts. Featuring coverage on a broad range of topics such as fog computing, network programming, and data security, this book is geared towards advanced-level students, researchers, and professionals interested in exploring and implementing the IoT and related technologies.

This book is prepared for the engineering students pursuing degree in computer science and information technology branch. The main consideration in writing the book is to present the considerable requirements of the syllabus in a simple manner as possible. This book contains many solved examples which will help student to gain confidence in problem solving. Valuable suggestion is heartily welcome for further improvement of this book

Master continuous integration, deployment and automated testing for Android apps. You'll see how to set up and tear down sandbox environments to test the end-user experience, where you'll learn how to manage a mobile device in addition to the build machine. Android Continuous Integration applies a real-world CI pattern that has been thoroughly tested and implemented. This book starts with continuous integration concepts and the tools and code needed to become proficient in continuous integration for Android apps. You'll also follow acceptance test driven development (ATDD) best practice, giving you all the skills you need to become a better, more effective developer. Finally, you'll learn about the Appium mobile automation library and the Jenkins continuous integration tool. What You Will Learn Understand how to build an Android mobile app from source Set up a development or debugging environment for mobile apps Integrate with the Nexus dependency management and application release tool Work with the SonarQube code quality analyzer Use debugging tools in Android Who This Book Is For Product owners/business analysts, QA/test engineers, developers and build/deploy engineers.

The increase in connected devices in the internet of things (IoT) is leading to an

exponential increase in the data that an organization is required to manage. To successfully utilize IoT in businesses, big data analytics are necessary in order to efficiently sort through the increased data. The combination of big data and IoT can thus enable new monitoring services and powerful processing of sensory data streams. The Handbook of Research on Big Data and the IoT is a pivotal reference source that provides vital research on emerging trends and recent innovative applications of big data and IoT, challenges facing organizations and the implications of these technologies on society, and best practices for their implementation. While highlighting topics such as bootstrapping, data fusion, and graph mining, this publication is ideally designed for IT specialists, managers, policymakers, analysts, software engineers, academicians, and researchers. Enterprises all over the world are experiencing a rapid development of networked computing for applications that are required for the daily survival of an organization. Client-server computing offers great potential for cost-effective networked computing. However, many organizations have now learned that the cost of maintenance and support of these networked distributed systems far exceeds the cost of buying them. Computer Supported Creative Work (CSCW) is the new evolving area that promotes the understanding of business processes and relevant communication technologies. Cooperative Management of Enterprise Networks uses CSCW as the medium for conveying ideas on the integration of business processes with network and systems management. This book will be useful for systems management professionals wishing to know about business process integration; business managers wishing to integrate their tasks with network/systems management; software system developers wishing to adopt participatory design practices; and students and researchers. Existing methods for calibration of computationally expensive environmental models and assessing the impacts of parametric uncertainty require a large number of simulations of the model. This dissertation focuses on developing efficient methods that use function approximation (FA) for automatic calibration and uncertainty assessment. These methods are applied to DECHLOR, a computationally expensive model for the engineered bioremediation of chlorinated ethenes in ground-water. Two FA algorithms were compared with population- and non-population-based heuristic methods and a traditional, derivative-based nonlinear optimization method for automatic calibration of parameters for hypothetical and real cases of engineered bioremediation of chlorinated ethenes. Results from independent optimization trials showed that the FA methods considered in this work outperformed heuristic and derivative-based methods for the cases considered. Field-specific identification of parameters was carried out using DECHLOR to model the treatability test data from a TCE contaminated site. For this site, parameters estimated from laboratory microcosms did not explain the field degradation processes. Subsequently, field-specific calibration was demonstrated using DECHLOR. A new method is presented - namely automatic calibration and uncertainty assessment using

response surfaces (ACUARS), which uses the results of function-approximation-based automatic calibration for assessing the impacts of parametric uncertainty. Importance weights that are corrected for clustering are assigned to the parameters explored during automatic calibration and subsequently used in uncertainty assessment. ACUARS outperformed the generalized likelihood uncertainty assessment (GLUE) method in two hypothetical engineered bioremediation examples. ACUARS was much more efficient than GLUE in identifying acceptable samples for a given calibration threshold and also enabled the use of a more stringent acceptability threshold. Thus, ACUARS reduced the uncertainty in model outputs. A new methodology is presented for automatic calibration and uncertainty assessment using FA optimization and Bayesian inference. FA algorithm is used to maximize the log-likelihood and subsequently provide a response surface for the log-likelihood which acts as a surrogate in numerical Bayesian sampling of the posterior distribution. A new method that combines contaminant transport modeling, geostatistical simulation and myopic heuristic optimization with an error-reducing search neighborhood is presented for identifying optimal design for long-term monitoring of multiple contaminants over multiple time periods under uncertain hydrogeological conditions.

This IBM® Redbooks® publication discusses practical uses of the IBM CICS asynchronous API capability. It describes the methodology, design and thought process used by a large client, Walmart, and the considerations of the choices made. The Redbooks publication provides real life examples and application patterns that benefit from the performance and scalability offered by the new API. The book discusses the homegrown methodology used by Walmart before the API was available and compares it with the design using the new API. A discussion of the process used to migrate older applications to begin using the new API is included so the reader will understand the ease of implementing the new API. A description of real world usage patterns describes the current production application Walmart has deployed as well as other patterns to give the reader a sense of what's possible applying creative thinking with technology improvements. Finally, a section is included on the areas to be considered as you begin to plan and implement asynchronous API capabilities. This book should be read by: Enterprise Architects searching for faster ways to service strategic applications across the enterprise. Solution Architects who want to better understand implementation possibilities for improved response times and better performance for CICS applications. CICS programmers looking to modernize and provide improved response times. This book is meant to be used in tandem with IBM Redbooks publication IBM CICS Asynchronous API: Concurrent Processing Made Simple, SG24-8411, which will provide the background and implementation instructions and commands for the API itself.

'Success for All' - Covers complete theory, practice and assessment of Science for Class 7. The guide has been divided in 18 chapters giving coverage to the syllabus. Each Chapter is supported by detailed theory, illustrations, all types of

practice questions. Special focus on New pattern objective questions. Every Chapter accompanies Basic Concepts (Topicwise), NCERT Questions and Answers, exam practice and self assessment for quick revisions. The current edition of "Success for All" for Class 7th is a self – Study guide that has been carefully and consciously revised by providing proper explanation guidance and strictly following the latest CBSE syllabus issued on 31 March 2020. The whole syllabus of the book is divided into 18 chapters and each Chapter is further divided into chapters. To make students completely ready for exams. This book is provided with detailed theory & Practice Questions in all chapters. Every Chapter in this book carries summary, exam practice and self assessment at the end for quick revision. This book provides 3 varieties of exercises-topic exercise: for assessment of topical understanding Each topic of the Chapter has topic exercise, NCERT Questions and Answers: it contains all the questions of NCERT with detailed solutions and exam practice: It contains all the Miscellaneous questions like MCQs, true and false, fill in the blanks, VSAQ's SAQ's, LAQ's. Well explained answers have been provided to every question that is given in the book. Success for All Science for CBSE Class 7 has all the material for learning, understanding, practice assessment and will surely guide the students to the way of success.

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This book offers a full account of thermodynamic systems in chemical engineering. It provides a solid understanding of the basic concepts of the laws of thermodynamics as well as their applications with a thorough discussion of phase and chemical reaction equilibria. At the outset the text explains the various key terms of thermodynamics with suitable examples and then thoroughly deals with the virial and cubic equations of state by showing the P-V-T (pressure, molar volume and temperature) relation of fluids. It elaborates on the first and second laws of thermodynamics and their applications with the help of numerous engineering examples. The text further discusses the concepts of exergy, standard property changes of chemical reactions, thermodynamic property relations and fugacity. The book also includes detailed discussions on residual and excess properties of mixtures, various activity coefficient models, local composition models, and group contribution methods. In addition, the text focuses on vapour-liquid and other phase equilibrium calculations, and analyzes chemical reaction equilibria and adiabatic reaction temperature for systems with complete and incomplete conversion of reactants. key Features ? Includes a large number of fully worked-out examples to help students master the concepts discussed. ? Provides well-graded problems with answers at the end of each chapter to test and foster students' conceptual understanding of the subject. The total number of solved examples and end-chapter exercises in the book are over 600. ? Contains chapter summaries that review the major concepts covered. The book is primarily designed for the undergraduate students of chemical engineering and its related disciplines such as petroleum engineering and polymer engineering. It can also be useful to professionals. The Solution Manual containing the complete worked-out solutions to chapter-end exercises and problems is available for instructors.

Outlook 2007 in Simple Steps is a book that helps you learn Outlook 2007, the contemporary offering from Microsoft. Being precise and complete, it offers the reader a cutting edge in the field of Outlook 2007. An easy to understand style, lots of examples to support the concepts, and use of practical approach in presentation are some of the features that make the book unique in itself. Text in this book is presented in such a way that it will be equally helpful to the beginners as well as to the professionals. Constant improvements in technological applications have allowed for more opportunities to develop automated systems. This not only leads to higher success in smart data analysis, but also ensures that technological progression will continue. Ubiquitous Machine Learning and its Applications is a pivotal reference source for the latest research on the issues and challenges machines face in the new millennium. Featuring extensive coverage on relevant areas such as computational advertising, software engineering, and bioinformatics, this publication is an ideal resource for academicians, graduate students, engineering professionals, and researchers interested in discovering how they can apply these advancements to various disciplines.

The role of small hydropower is becoming increasingly important on a global level. Increasing energy demand and environmental awareness has further triggered research and development into sustainable low-cost technologies. In developing countries, particularly in rural areas, the possibility of local power generation could considerably improve living conditions. With this in mind, the development of a next generation low-head hydropower machines was subject of investigation in the EU-project HYLOW. Being part of the research lines of that project, this thesis presents a numerical modelling approach to improve the design of machines like water wheels for increased hydraulic efficiency. Nowadays, Computational Fluid Dynamics (CFD) enables numerical models to be quite accurate and incorporate physical complexities like free surfaces and rotating machines. The results of the CFD simulations carried out in this research show that a change in blade geometry can result in higher torque levels, thereby increasing performance. Numerical simulations also enabled to determine the optimal wheel-width to channel-width ratio and further improve performance by modifying the channel bed conditions upstream and downstream of the water wheel. With a power rating in the low kilowatt range, low-head hydropower machines like optimised water wheels seem to have a clear potential for small-scale energy generation, thereby contributing to achieving the Sustainable Development Goals by providing local energy solutions.

Presented in a question-answer format, "Problems and Solutions in Advanced Accounting for CA Intermediate" is specially designed for the students who are preparing for Group-II, Paper 5: Advanced Accounting. The content has been carefully carved out to cover the problems that are most frequently asked in examinations and are aligned to the syllabus. Care has been taken to include problems of simple as well as complex nature and solutions to most of the problems have been provided in a step-by-step manner which makes it easier for the student to understand the concepts and fetch marks. Salient Features: ? Content is strictly aligned to the topical flow as guided by the syllabus of ICAI. ? Coverage of Questions from RTPs and MTPs of ICAI examination. ? Thoroughly updated content includes latest changes in Accounting and the Companies Act, 2013. ? Questions from previous year ICAI examinations,

Revisionary Test Papers (RTPs), Mock Test Papers (MTPs), and other professional bodies have been incorporated to provide enhanced understanding and extensive practice to the students. ? Each chapter is further subdivided in various sections to develop the concepts in a methodical manner.

BUSINESS ANALYSISSOLVING BUSINESS PROBLEMS BY VISUALIZING EFFECTIVE PROCESSES AND IT SOLUTIONSPHI Learning Pvt. Ltd.

Pradeep Chhibber and Ken Kollman rely on historical data spanning back to the eighteenth century from Canada, Great Britain, India, and the United States to revise our understanding of why a country's party system consists of national or regional parties. They demonstrate that the party systems in these four countries have been shaped by the authority granted to different levels of government. Departing from the conventional focus on social divisions or electoral rules in determining whether a party system will consist of national or regional parties, they argue instead that national party systems emerge when economic and political power resides with the national government. Regional parties thrive when authority in a nation-state rests with provincial or state governments. The success of political parties therefore depends on which level of government voters credit for policy outcomes. National political parties win votes during periods when political and economic authority rests with the national government, and lose votes to regional and provincial parties when political or economic authority gravitates to lower levels of government. This is the first book to establish a link between federalism and the formation of national or regional party systems in a comparative context. It places contemporary party politics in the four examined countries in historical and comparative perspectives, and provides a compelling account of long-term changes in these countries. For example, the authors discover a surprising level of voting for minor parties in the United States before the 1930s. This calls into question the widespread notion that the United States has always had a two-party system. In fact, only recently has the two-party system become predominant.

Artificial Intelligence to Solve Pervasive Internet of Things Issues discusses standards and technologies and wide-ranging technology areas and their applications and challenges, including discussions on architectures, frameworks, applications, best practices, methods and techniques required for integrating AI to resolve IoT issues. Chapters also provide step-by-step measures, practices and solutions to tackle vital decision-making and practical issues affecting IoT technology, including autonomous devices and computerized systems. Such issues range from adopting, mitigating, maintaining, modernizing and protecting AI and IoT infrastructure components such as scalability, sustainability, latency, system decentralization and maintainability. The book enables readers to explore, discover and implement new solutions for integrating AI to solve IoT issues. Resolving these issues will help readers address many real-world applications in areas such as scientific research, healthcare, defense, aeronautics, engineering, social media, and many others. Discusses intelligent techniques for the implementation of Artificial Intelligence in Internet of Things Prepared for researchers and specialists who are interested in the use and integration of IoT and Artificial Intelligence technologies

The book provides an extensive coverage of conjugated polymer based nano-composite coatings with advanced anti-corrosive properties. The book gives detailed

explanation of corrosion testing methods and techniques to evaluate the corrosion resistance of the coatings. It includes elaborate discussion on classification of corrosion, electrochemistry of corrosion process, theories explaining the mechanism of corrosion and various corrosion testing standards. Electrochemical studies like open circuit potential (OCP) variation with time, potentiodynamic polarization, Electrochemical Impedance Spectroscopy (EIS) and accelerated corrosion testing are highlighted as important tools to extract information about the behavior of coatings under corrosive conditions. The book discusses epoxy-conjugated polymer based novel composite coating formulations, including aniline and o-toluidine, o-anisidine, phenetidine and pentafluoroaniline with appropriate fillers like SiO_2, flyash, ZrO_2 nanoparticles, and chitosan for the protection of metallic substrates. A general discussion on the self healing mechanism of epoxy-polypyrrole based biopolymer hybrid composite coatings is included in this book. This book provides a critical review on the conjugated polymer based composite coatings with superior corrosion resistance, good mechanical integrity, better adhesion properties and self healing ability under highly aggressive conditions which can be commercially used for the protection of metal substrates from corrosion.

Cognitive Big Data Intelligence with a Metaheuristic Approach presents an exact and compact organization of content relating to the latest metaheuristics methodologies based on new challenging big data application domains and cognitive computing. The combined model of cognitive big data intelligence with metaheuristics methods can be used to analyze emerging patterns, spot business opportunities, and take care of critical process-centric issues in real-time. Various real-time case studies and implemented works are discussed in this book for better understanding and additional clarity. This book presents an essential platform for the use of cognitive technology in the field of Data Science. It covers metaheuristic methodologies that can be successful in a wide variety of problem settings in big data frameworks. Provides a unique opportunity to present the work on the state-of-the-art of metaheuristics approach in the area of big data processing developing automated and intelligent models Explains different, feasible applications and case studies where cognitive computing can be successfully implemented in big data analytics using metaheuristics algorithms Provides a snapshot of the latest advances in the contribution of metaheuristics frameworks in cognitive big data applications to solve optimization problems E-Business covers a broad spectrum of businesses based on the Internet, including e-commerce, e-healthcare, e-government and e tailing. While substantial attention is being given to the planning and development of e-business applications, the efficiency and effectiveness of e-business systems will largely depend on management solutions. These management solutions demand a good grasp of both the technical and business perspectives of an e-business service. There have been many books on the Internet based on e-commerce, Internet protocols, distributed components etc. However, none of these books address the problem of managing e business as a set of networked services. They do not link enterprise management with network and systems management. This book provides an overview of the emerging techniques for IT service management from a business perspective with case studies from telecommunication and healthcare sectors. It integrates the business perspective with relevant technical standards, such as SNMP, WBEM and DMI. This book presents some concepts and

methodologies that enable the development of effective and efficient management systems for networked services. The book is intended to familiarize practicing managers, engineers, and graduate level students with networked service management concepts, architectures and methodologies with reference to evolving standards. It should be useful in a number of disciplines, such as business management, information systems, computers and networking, and telecommunications. Appendix 2 is based on TeleManagement (TM) Forum's documents on TOM (GB921,GB910 and GB908). While this appendix has explained the basic management concept of an e-telco, TMForum now recommends the use of eTOM as explained in www.tmforum.com. An overview of eTOM is available in the report The TeleManagement Forum's enhanced Telecom Operations Map (eTOM) by Michael Kelly appearing in the Journal of Network and Systems Management in March 2003.

The volume, complexity, and irregularity of computational data in modern algorithms and simulations necessitates an unorthodox approach to computing. Understanding the facets and possibilities of soft computing algorithms is necessary for the accurate and timely processing of complex data. Research Advances in the Integration of Big Data and Smart Computing builds on the available literature in the realm of Big Data while providing further research opportunities in this dynamic field. This publication provides the resources necessary for technology developers, scientists, and policymakers to adopt and implement new paradigms in computational methods across the globe. The chapters in this publication advance the body of knowledge on soft computing techniques through topics such as transmission control protocol for mobile ad hoc networks, feature extraction, comparative analysis of filtering techniques, big data in economic policy, and advanced dimensionality reduction methods.

Cisco Unity Deployment and Solutions Guide shows you how to integrate Cisco Unity with Cisco IP-based communication solutions, including Cisco CallManager. Part I introduces you to the Cisco Unity architecture and teaches you about the Cisco Unity feature set. Part II helps you design and deploy a unified message solution with Cisco Unity, and Part III helps you manage and administer your solution by leveraging the tools within Cisco Unity. Cisco Unity Deployment and Solutions Guide teaches you all that you need to know about designing, deploying, and managing a sustainable, unified messaging solution.

Platform Embedded Security Technology Revealed is an in-depth introduction to Intel's platform embedded solution: the security and management engine. The engine is shipped inside most Intel platforms for servers, personal computers, tablets, and smartphones. The engine realizes advanced security and management functionalities and protects applications' secrets and users' privacy in a secure, light-weight, and inexpensive way. Besides native built-in features, it allows third-party software vendors to develop applications that take advantage of the security infrastructures offered by the engine. Intel's security and management engine is technologically unique and significant, but is largely unknown to many members of the tech communities who could potentially benefit from it. Platform Embedded Security Technology Revealed reveals technical details of the engine. The engine provides a new way for the computer security industry to resolve critical problems resulting from booming mobile technologies, such as increasing threats against confidentiality and privacy. This book describes how this advanced level of protection is made possible by the engine, how it

can improve users' security experience, and how third-party vendors can make use of it. It's written for computer security professionals and researchers; embedded system engineers; and software engineers and vendors who are interested in developing new security applications on top of Intel's security and management engine. It's also written for advanced users who are interested in understanding how the security features of Intel's platforms work.

The book discusses important developments emerging around the land questions in India in the context of India's neoliberal economic development and its changing political economy. It covers many issues that have been impinging the political economy in land and livelihoods in India since the 1990s, examining the land question from diverse methodological standpoints. Most of the chapters rely on evidence generated through primary surveys in different parts of the country. The book, via its diversity of approaches and methodologies, brings out new and hitherto unexplored and/or less researched issues on the emerging land question in India. The range of issues addressed in the volume encompasses the contemporary developments in the political economy of land, land dispossession, SEZs, agrarian changes, urbanisation and the drive for the commodification of land across India. The authors also examine role of the state in promoting the capitalist transformation in India and continuities and changes emerging in the context of land liberalisation and market-friendly economic reforms.

As technology continues to saturate modern society, agriculture has started to adopt digital computing and data-driven innovations. This emergence of "smart" farming has led to various advancements in the field, including autonomous equipment and the collection of climate, livestock, and plant data. As connectivity and data management continue to revolutionize the farming industry, empirical research is a necessity for understanding these technological developments. Artificial Intelligence and IoT-Based Technologies for Sustainable Farming and Smart Agriculture provides emerging research exploring the theoretical and practical aspects of critical technological solutions within the farming industry. Featuring coverage on a broad range of topics such as crop monitoring, precision livestock farming, and agronomic data processing, this book is ideally designed for farmers, agriculturalists, product managers, farm holders, manufacturers, equipment suppliers, industrialists, governmental professionals, researchers, academicians, and students seeking current research on technological applications within agriculture and farming.

The world's fresh water supplies are dwindling rapidly—even wastewater is now considered an asset. By 2025, most of the world's population will be facing serious water stresses and shortages. Aquananotechnology: Global Prospects breaks new ground with its informative and innovative introduction of the application of nanotechnology to the remediation of contaminated water for drinking and industrial use. It provides a comprehensive overview, from a global perspective, of the latest research and developments in the use of nanotechnology for water purification and desalination methods. The book also covers approaches to remediation such as high surface area nanoscale media for adsorption of toxic species, UV treatment of pathogens, and regeneration of saturated media with applications in municipal water supplies, produced water from fracking, ballast water, and more. It also discusses membranes, desalination, sensing, engineered polymers, magnetic nanomaterials, electrospun nanofibers, photocatalysis, endocrine disruptors, and Al13 clusters. It explores physics-based phenomena such as subcritical water and cavitation-induced sonoluminescence, and fog harvesting. With contributions from experts in developed and developing countries, including those with severe contamination, such as China, India, and Pakistan, the book's content spans a wide range of

the subject areas that fall under the aquananotechnology banner, either squarely or tangentially. The book strongly emphasizes sorption media, with broad application to a myriad of contaminants—both geogenic and anthropogenic—keeping in mind that it is not enough for water to be potable, it must also be palatable.

The Science and Engineering of Materials Sixth Edition describes the foundations and applications of materials science as predicated upon the structure-processing-properties paradigm with the goal of providing enough science so that the reader may understand basic materials phenomena, and enough engineering to prepare a wide range of students for competent professional practice. By selecting the appropriate topics from the wealth of material provided in The Science and Engineering of Materials, instructors can emphasize materials, provide a general overview, concentrate on mechanical behavior, or focus on physical properties. Since the book has more material than is needed for a one-semester course, students will also have a useful reference for subsequent courses in manufacturing, materials, design, or materials selection. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

In distributed, open systems like cyberspace, where the behavior of autonomous agents is uncertain and can affect other agents' welfare, trust management is used to allow agents to determine what to expect about the behavior of other agents. The role of trust management is to maximize trust between the parties and thereby provide a basis for cooperation to develop. Bringing together expertise from technology-oriented sciences, law, philosophy, and social sciences, Managing Trust in Cyberspace addresses fundamental issues underpinning computational trust models and covers trust management processes for dynamic open systems and applications in a tutorial style that aids in understanding. Topics include trust in autonomic and self-organized networks, cloud computing, embedded computing, multi-agent systems, digital rights management, security and quality issues in trusting e-government service delivery, and context-aware e-commerce applications. The book also presents a walk-through of online identity management and examines using trust and argumentation in recommender systems. It concludes with a comprehensive survey of anti-forensics for network security and a review of password security and protection. Researchers and practitioners in fields such as distributed computing, Internet technologies, networked systems, information systems, human computer interaction, human behavior modeling, and intelligent informatics especially benefit from a discussion of future trust management research directions including pervasive and ubiquitous computing, wireless ad-hoc and sensor networks, cloud computing, social networks, e-services, P2P networks, near-field communications (NFC), electronic knowledge management, and nano-communication networks.

Empowering learners for life requires a fundamental shift in higher education curriculum design. New priorities, pedagogies, technologies, spaces, and assessment strategies are required to enable learners to take ownership of their learning. "Student-centeredness" concepts are still prescriptive in nature as most decisions on curriculum, assessment, teaching, and learning approaches are still teacher-centric. Teachers are developing student-centered learning environments without the involvement of the learners in the planning, decision making, and/or design process. In addition, some lecturers are still practicing the traditional approaches of content delivery and conventional assessment methods rather than experimenting with innovative practices suited for student-centered approaches. Therefore, there is an ongoing need for research focused on the importance and effectiveness of a paradigm shift in education that involves student-teacher partnerships, fueled by innovative teaching and learning designs, where students take an active role and contribute as partners in learning. Transforming Curriculum Through Teacher-Learner Partnerships captures experiences and evidence among teachers in exploring the possibility of active student participation in curriculum design, delivery, and assessment through teacher-learner partnership. The

chapters address issues of teacher-learner partnerships in designing the learning environment and how student-centered methods create resilient, adaptable, and future-capable learners. While highlighting topics within this scope such as learner autonomy, learning performance, self-efficacy, and teaching pedagogy, this book is ideally intended for teachers, administrators, teacher educators, practitioners, stakeholders, researchers, academicians, and students interested in issues related to the teacher-learner partnership.

Continuous improvements in technological applications have allowed more opportunities to develop systems with user-focused designs. This not only leads to higher success in day-to-day usage, but it increases the overall probability of technology adoption. Design Solutions for User-Centric Information Systems provides a comprehensive examination of the latest strategies and methods for creating technological systems with end users as the focal point of the design process. Highlighting innovative practices and applications across a variety of areas, such as cloud-based computing services, e-government adoption, and logistics evaluation, this book is an ideal reference source for computer engineers, practitioners, project managers, graduate students, and researchers interested in the enhancement of user-centric information system development.

Genetic programming is a new and evolutionary method that has become a novel area of research within artificial intelligence known for automatically generating high-quality solutions to optimization and search problems. This automatic aspect of the algorithms and the mimicking of natural selection and genetics makes genetic programming an intelligent component of problem solving that is highly regarded for its efficiency and vast capabilities. With the ability to be modified and adapted, easily distributed, and effective in large-scale/wide variety of problems, genetic algorithms and programming can be utilized in many diverse industries. This multi-industry uses vary from finance and economics to business and management all the way to healthcare and the sciences. The use of genetic programming and algorithms goes beyond human capabilities, enhancing the business and processes of various essential industries and improving functionality along the way. The Research Anthology on Multi-Industry Uses of Genetic Programming and Algorithms covers the implementation, tools and technologies, and impact on society that genetic programming and algorithms have had throughout multiple industries. By taking a multi-industry approach, this book covers the fundamentals of genetic programming through its technological benefits and challenges along with the latest advancements and future outlooks for computer science. This book is ideal for academicians, biological engineers, computer programmers, scientists, researchers, and upper-level students seeking the latest research on genetic programming.

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