Chapter 1 Solutions For Fundamentals Of Futures Options Markets

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Financial Risk Management and Derivative Instruments Michael Dempsey 2021-05-17 Financial Risk Management and Derivative Instruments offers an introduction to the riskiness of stock markets and the application of derivative instruments in managing exposure to such risk. Structured in two parts, the first part offers an introduction to stock market and bond market risk as encountered by investors seeking investment growth. The second part of the text introduces the financial derivative instruments that provide for either a reduced exposure (hedging) or an increased exposure (speculation) to market risk. The fundamental aspects of the futures and options derivative markets and the tools of the Black-Scholes model are examined. The text sets the topics in their global context, referencing financial shocks such as Brexit and the Covid-19 pandemic. An accessible writing style is supported by pedagogical features such as key insights boxes, progressive illustrative examples and end-of-chapter tutorials. The book is supplemented by PowerPoint slides designed to assist presentation of the text material as well as providing a coherent summary of the lectures. This textbook provides an ideal text for introductory courses to derivative instruments and financial risk management for either undergraduate, masters or MBA students.

Electronics and Communications for Scientists and Engineers Martin Plonus 2020-02-25 Electronics and Communications for Scientists and Engineers, Second Edition, offers a valuable and unique overview on the basics of electronic technology and the internet. Class-tested over many years with students at Northwestern University, this useful text covers the essential electronics and communications topics for students and practitioners in engineering, physics, chemistry, and other applied sciences. It describes the electronic underpinnings of the World Wide Web and explains the basics of digital technology, including computing and communications, circuits, analog and digital electronics, as well as special topics such as operational amplifiers, data compression, ultra high definition TV, artificial intelligence, and quantum computers. Incorporates comprehensive updates and expanded material in all chapters where appropriate Includes new problems added throughout the text Features an updated section on RLC circuits Presents revised and new content in Chapters 7, 8, and 9 on digital systems, showing the many changes and rapid progress in these areas since 2000

Implementing Electronic Document and Record Management Systems Azad Adam 2007-08-24 The global shift toward delivering services online requires organizations to evolve from using traditional paper files and storage to more modern electronic methods. There has however been very little information on just how to navigate this change-until now. Implementing Electronic Document and Record Management Systems explains how to efficiently store and access electronic documents and records in a manner that allows quick and efficient access to information so an organization may meet the needs of its clients. The book addresses a host of issues related to electronic document and records management systems (EDRMS). From starting the project to systems administration, it details every aspect in relation to implementation and management processes. The text also explains managing cultural changes and business process re-engineering that organizations undergo as they switch from paper-based records to electronic documents. It offers case studies that examine how various organizations across the globe have implemented EDRMS. While the task of creating and employing an EDRMS may seem daunting at best, Implementing Electronic Document and Record Management Systems is the resource that can provide you with the direction and guidance you need to make the transition as seamless as possible.

Blockchain Technology and its Impact on International Trade. What does the Future Hold? Mehedi Hasan 2021-10-18 Master's Thesis from the year 2021 in the subject Business economics - Miscellaneous, grade: Merit, University of Salford, course: International Business, language: English, abstract: The research aimed to analyse the impact of blockchain technology on international trade and find out how blockchain technology can improve the various fields of international trade. The research also intended to find the challenges regarding the implementation of blockchain technology in international trade to help companies achieve successful collaboration and understand what requirements need to be met in advance. The literature review of this research covered the fundamentals of blockchain technology, blockchain's role in facilitating supply chain and trade finance, the impact and adoption of blockchain technology, and blockchain implementation's key challenges. A qualitative approach was used based on 12 semi-structured in-depth interviews with ten companies operating in different business fields and two blockchain specialists to obtain empirical data. This research found that blockchain technology has significantly impacted international trade by improving supply chain efficiency, reducing the complexity of the paper-based trade process, and enabling faster cross-border payments. The empirical findings presented that blockchain can facilitate the supply chain by providing a high level of transparency and better product traceability. Furthermore, the findings showed that smart contracts could facilitate trade finance by providing automatic payments and eliminating intermediaries and blockchain-based ICOs could be a great fundraising option for innovative projects. However, this research also found that the large-scale implementation of blockchain in trade finance is still not possible due to government regulations. Blockchain technology ensures to transform the supply chain and trade finance and reduce the complexity of the current international trade process. However, some critical challenges are associated with blockchain implementation, and some essential requirements need to be met in advance for successful implementation, which was discussed in this research. Furthermore, several suggestions regarding the large-scale implementation of blockchain in trade finance were presented. The empirical findings will help companies develop their adoption strategies and prepare to implement the technology in the trade process. Furthermore, the findings of this research can bring new insight into the policymaking process regarding the implementation of blockchain in trade finance.

Wireless Technologies in Vehicular Ad Hoc Networks: Present and Future Challenges Aquino-Santos, Raul 2012-02-29 "This book explores different models for inter-vehicular communication, in which vehicles are equipped with on-board computers that function as nodes in a wireless network"--Provided by publisher.

Pro ADO.NET Data Services John Shaw 2009-01-29 Pro ADO.NET Data Services: Working with RESTful Data is aimed at developers interested in taking advantage of the REST-style data services that ADO.NET Data Services (formerly code-named Astoria) provides. The book shows how to incorporate ADO.NET Data Services into a wide range of common environments, including BizTalk, Ajax and Silverlight client applications. The material is intended for professional developers who are comfortable with the .NET 3.5 Framework but are coming to ADO.NET Data Services for the first time and want to understand how to integrate it into their own applications and enterprise solutions. The book is packed full with extensive real-world solutions and exercises, ensuring you walk away with a deep understanding of how to use ADO.NET Data Services to your best advantage.

ESD Steven H. Voldman 2005-12-13 This volume is the first in a series of three books addressing Electrostatic Discharge (ESD) physics, devices, circuits and design across the full range of integrated circuit technologies. ESD Physics and Devices provides a concise treatment of the ESD phenomenon and the physics of devices operating under ESD conditions. Voldman presents an accessible introduction to the field for engineers and researchers requiring a solid grounding in this important area. The book contains advanced CMOS, Silicon On Insulator, Silicon Germanium, and Silicon Germanium Carbon. In addition it also addresses ESD in advanced CMOS with discussions on shallow trench isolation (STI), Copper and Low K materials. Provides a clear understanding of ESD device physics and the fundamentals of ESD phenomena. Analyses the behaviour of semiconductor devices under ESD conditions. Addresses the growing awareness of the problems resulting from ESD phenomena in advanced integrated circuits. Covers ESD testing, failure criteria and scaling theory for CMOS, SOI (silicon on insulator), BiCMOS and BiCMOS SiGe (Silicon Germanium) technologies for the first time. Discusses the design and development implications of ESD in semiconductor technologies. An invaluable reference for EMC non-specialist engineers and researchers working in the fields of IC and transistor design. Also, suitable for researchers and advanced students in the fields of device/circuit modelling and semiconductor reliability.

Architecting Google Cloud Solutions Victor Dantas 2021-05-14 Achieve your business goals and build highly available, scalable, and secure cloud infrastructure by designing robust and cost-effective solutions as a Google Cloud Architect. Key FeaturesGain hands-on experience in designing and managing high-performance cloud solutionsLeverage Google Cloud Platform to optimize technical and business processes using cutting-edge technologies and servicesUse Google Cloud Big Data, AI, and ML services to design scalable and intelligent data solutionsBook

Description Google has been one of the top players in the public cloud domain thanks to its agility and performance capabilities. This book will help you design, develop, and manage robust, secure, and dynamic solutions to successfully meet your business needs. You'll learn how to plan and design network, compute, storage, and big data systems that incorporate security and compliance from the ground up. The chapters will cover simple to complex use cases for devising solutions to business problems, before focusing on how to leverage Google Cloud's Platform-as-a-Service (PaaS) and Software-as-a-Service (SaaS) capabilities for designing modern no-operations platforms. Throughout this book, you'll discover how to design for scalability, resiliency, and high availability. Later, you'll find out how to use Google Cloud to design modern applications using microservices architecture, automation, and Infrastructure-as-Code (IaC) practices. The concluding chapters then demonstrate how to apply machine learning and artificial intelligence (AI) to derive insights from your data. Finally, you will discover best practices for operating and monitoring your cloud solutions, as well as performing troubleshooting and quality assurance. By the end of this Google Cloud book, you'll be able to design robust enterprise-grade solutions using Google Cloud Platform. What you will learnGet to grips with compute, storage, networking, data analytics, and pricingDiscover delivery models such as IaaS, PaaS, and SaaSExplore the underlying technologies and economics of cloud computingDesign for scalability, business continuity, observability, and resiliencySecure Google Cloud solutions and ensure complianceUnderstand operational best practices and learn how to architect a monitoring solutionGain insights into modern application design with Google CloudLeverage big data, machine learning, and AI with Google CloudWho this book is for This book is for cloud architects who are responsible for designing and managing cloud solutions with GCP. You'll also find the book useful if you're a system engineer or enterprise architect looking to learn how to design solutions with Google Cloud. Moreover, cloud architects who already have experience with other cloud providers and are now beginning to work with Google Cloud will benefit from the book. Although an intermediate-level understanding of cloud computing and distributed apps is required, prior experience of working in the public and hybrid cloud domain is not mandatory.

Spatial Database Systems Albert K.W. Yeung 2007-05-23 This book places spatial data within the broader domain of information technology (IT) while providing a comprehensive and coherent explanation of the guiding principles, methods, implementation and operational management of spatial databases within the workplace. The text explains the key concepts, issues and processes of spatial data implementation and provides a holistic management perspective.

Handbook of Research on Industrial Informatics and Manufacturing Intelligence: Innovations and Solutions Khan, Mohammad Ayoub 2012-03-31 "This book is the best source for the most current, relevant, cutting edge research in the field of industrial informatics focusing on different methodologies of information technologies to enhance industrial fabrication, intelligence, and manufacturing processes"--Provided by publisher.

Current Trends and Future Developments on (Bio-) Membranes Angelo Basile 2020-05-08 Water is the most valuable resource for all human development. With increasing global population the demand for water increases whereas the sources of clean water are decreasing. recycling and reuse of wastewater has become an imperative which demands the development of new, efficient and environmentally friendly treatment methods. Current Trends and Future Developments in (Bio-) Membranes: Recent Achievements in Wastewater and Water Treatments provides a comprehensive coverage of the existing wastewater treatment including, but not exclusively, membrane-based methods. The book presents most common used methods compares and evaluates them depending on their particular application. It illustrates many aspects of the various treatment systems used in water and wastewater purification and lists the advantages of membrane-based methods to non-membrane based technologies. This book focuses on introducing, applications, advantages/disadvantages, evaluating of membrane-based technologies and comparing it with other non-membrane based systems. It also analyses the various limitations of each method. Hence, the book is a key reference text for R&D managers in industry interested in the development of water/waste treatment technologies as well as academic researchers and postgraduate students working in the wider area of the strategic treatment, separation and purification processes. Provides the state-of-the-art of water and wastewater treatments by various technologies Describes novel and emerging technologies for waste/water treatment Discusses a number of case studies of popular applications Offers an economic evaluation of various technologies

Exploring Services Science Theodor Borangiu 2016-05-18 This book contains the refereed proceedings of the 7th International Conference on Exploring Service Science (IESS), held in Bucharest, Romania, in May 2016.Service science constitutes an interdisciplinary approach to systematic innovation in service systems, integrating managerial, social, legal, and engineering aspects to address the theoretical and practical challenges of the service industry and its economy. The 45 full papers and 13 short papers accepted for IESS were selected from 119 submissions. The papers consider the topics service exploration theories and processes; modeling service requirements and management of business processes; value co-creation through knowledge management and user-centric services; service design methodologies and patterns; service innovation and strategy; IT-based service engineering; servitization in sustainable manufacturing; product-service systems; business software services and data-driven service design; web service design and service-oriented agents; IoT and mobile apps for public transport service management; e-health services and medical data interoperability; and service and IT-oriented learning and education systems.

Fundamentals of Futures and options markets John Hull 2013-09-12 This first Australasian edition of Hull's bestselling Fundamentals of Futures and Options Markets was adapted for the Australian market by a local team of respected academics. Important local content distinguishes the Australasian edition from the US edition, including the unique financial instruments commonly traded on the Australian securities and derivatives markets and their surrounding conventions. In addition, the inclusion of Australasian and international business examples makes this text the most relevant and useful resource available to Finance students today. Hull presents an accessible and student-friendly overview of the topic without the use of calculus and is ideal for those with a limited background in mathematics. Packed with numerical examples and accounts of real-life situations, this text effectively guides students through the material while helping them prepare for the working world. For undergraduate and post-graduate courses in derivatives, options and futures, financial engineering, financial mathematics, and risk management.

Biomass as a Sustainable Energy Source for the Future Wiebren de Jong 2014-10-03 Focusing on the conversion of biomass into gas or liquid fuels the book covers physical pre-treatment technologies, thermal, chemical and biochemical conversion technologies • Details the latest biomass characterization techniques • Explains the biochemical and thermochemical conversion processes • Discusses the development of integrated biorefineries, which are similar to petroleum refineries in concept, covering such topics as reactor configurations and downstream processing • Describes how to mitigate the environmental risks when using biomass as fuel • Includes many problems, small projects, sample calculations and industrial application examples

CCNP BCRAN Exam Certification Guide Brian Morgan 2003 & Learn the remote access design and management topics for the NEW Cisco CCNP 642-821 BCRAN exam with the only official preparation book. & & Practice with over 200 test questions including simulation based questions on the enclosed CD-ROM. & & Prepare for the CCNP and CCDP BCRAN exam with proven learning tools from the number 1 selling Exam Certification Guide Series from Cisco Press.

Geotechnical Engineering in the XXI Century: Lessons learned and future challenges N.P. López-Acosta 2019-11-26 The first Pan-American Conference on Soil Mechanics and Geotechnical Engineering (PCSMGE) was held in Mexico in 1959. Every 4 years since then, PCSMGE has brought together the geotechnical engineering community from all over the world to discuss the problems, solutions and future challenges facing this engineering sector. Sixty years after the first conference, the 2019 edition returns to Mexico. This book, Geotechnical Engineering in the XXI Century: Lessons learned and future challenges, presents the proceedings of the XVI Pan-American Conference on Soil Mechanics and Geotechnical Engineering (XVI PCSMGE), held in Cancun, Mexico, from 17 - 20 November 2019. Of the 393 full papers submitted, 335 were accepted for publication after peer review. They are included here organized into 19 technical sessions, and cover a wide range of themes related to geotechnical engineering in the 21st century. Topics covered include: laboratory and in-situ testing; analytical and physical modeling in geotechnics; numerical modeling in geotechnics; unsaturated soils; soft soils; foundations and retaining structures; excavations and tunnels; offshore geotechnics; transportation in geotechnics; natural hazards; embankments and tailings dams; soils dynamics and earthquake engineering; ground improvement; sustainability and geo-environment; preservation of historic sites; forensics engineering; rock mechanics; education; and energy geotechnics. Providing a state-of-the-art overview of research into innovative and challenging applications in the field, the book will be of interest to all those working in soil mechanics and geotechnical engineering. In this proceedings, 58% of the contributions are in English, and 42% of the contributions are in Spanish or Portuguese.

Evolution of Medical Tourism Pramod Goel 2012 Provides an in-depth and behind-the-scenes glimpse into the growing phenomena of medical and dental tourism. Growing competition for affordable and accessible medical resources and providers has prompted a user-friendly yet thorough analysis of the medical tourism industry of the past, present and future in this meticulously researched and compiled 'how to' for up and coming as well as well-established medical providers around the world. Evolution of Medical Tourism: from Cottage Industry to Corporate World covers such topics as the future of the global healthcare industry to dealing with supply and demand in the medical tourism industry. From developing marketing channels to the importance of patient nurturing, negotiations and patient acquisition, this first-of-its-kind book offers guidance and information to established as well as new entrepreneurs in this field.

Future Directions for Intelligent Systems and Information Sciences Nikola Kasabov 2013-11-11 This edited volume comprises invited chapters that cover five areas of the current and the future development of intelligent systems and information sciences. Half of the chapters were presented as invited talks at the Workshop "Future Directions for Intelligent Systems and Information Sciences" held in Dunedin, New

Zealand, 22-23 November 1999 after the International Conference on Neuro-Information Processing (lCONIPI ANZIISI ANNES '99) held in Perth, Australia. In order to make this volume useful for researchers and academics in the broad area of information sciences I invited prominent researchers to submit materials and present their view about future paradigms, future trends and directions. Part I contains chapters on adaptive, evolving, learning systems. These are systems that learn in a life-long, on-line mode and in a changing environment. The first chapter, written by the editor, presents briefly the paradigm of Evolving Connectionist Systems (ECOS) and some of their applications. The chapter by Sung-Bae Cho presents the paradigms of artificial life and evolutionary programming in the context of several applications (mobile robots, adaptive agents of the WWW). The following three chapters written by R.Duro, J.Santos and J.A.Becerra (chapter 3), GCoghill . (chapter 4), Y.Maeda (chapter 5) introduce new techniques for building adaptive, learning robots.

The Future of Electricity Demand Tooraj Jamasb 2011-09-15 What will electricity and heat demand look like in a low-carbon world? Ambitious environmental targets will modify the shape of the electricity sector in the twenty-first century. 'Smart' technologies and demand-side management will be some of the key features of the future of electricity systems in a low-carbon world. Meanwhile, the social and behavioural dimensions will complement and interact with new technologies and policies. Electricity demand in the future will increasingly be tied up with the demand for heat and for transport. The Future of Electricity Demand looks into the features of the future electricity demand in light of the challenges posed by climate change. Written by a team of leading academics and industry experts, the book investigates the economics, technology, social aspects, and policies and regulations which are likely to characterize energy demand in a low-carbon world. It provides a comprehensive and analytical perspective on the future of electricity demand.

Fundamentals of 5G Mobile Networks Jonathan Rodriguez 2015-04-27 Fundamentals of 5G Mobile Networks provides an overview of the key features of the 5th Generation (5G) mobile networks, discussing the motivation for 5G and the main challenges in developing this new technology. This book provides an insight into the key areas of research that will define this new system technology paving the path towards future research and development. The book is multi-disciplinary in nature, and aims to cover a whole host of intertwined subjects that will predominantly influence the 5G landscape, including the future Internet, cloud computing, small cells and self-organizing networks (SONs), cooperative communications, dynamic spectrum management and cognitive radio, Broadcast-Broadband convergence , 5G security challenge, and green RF. This book aims to be the first of its kind towards painting a holistic perspective on 5G Mobile, allowing 5G stakeholders to capture key technology trends on different layering domains and to identify potential inter-disciplinary design aspects that need to be solved in order to deliver a 5G Mobile system that operates seamlessly.

Environmental Engineering Science William W. Nazaroff 2000-11-20 This book covers the fundamentals of environmental engineering and applications in water quality, air quality, and hazardous waste management. It begins by describing the fundamental principles that serve as the foundation of the entire field of environmental engineering. Readers are then systematically reintroduced to these fundamentals in a manner that is tailored to the needs of environmental engineers, and that is not too closely tied to any specific application.

Energy Research Abstracts 1986 Semiannual, with semiannual and annual indexes. References to all scientific and technical literature coming from DOE, its laboratories, energy centers, and contractors. Includes all works deriving from DOE, other related government-sponsored information, and foreign nonnuclear information. Arranged under 39 categories, e.g., Biomedical sciences, basic studies; Biomedical sciences, applied studies; Health and safety; and Fusion energy. Entry gives bibliographical information and abstract. Corporate, author, subject, report number indexes.

Ordinary Differential Equations Kenneth B. Howell 2019-12-06 The Second Edition of Ordinary Differential Equations: An Introduction to the Fundamentals builds on the successful First Edition. It is unique in its approach to motivation, precision, explanation and method. Its layered approach offers the instructor opportunity for greater flexibility in coverage and depth. Students will appreciate the author’s approach and engaging style. Reasoning behind concepts and computations motivates readers. New topics are introduced in an easily accessible manner before being further developed later. The author emphasizes a basic understanding of the principles as well as modeling, computation procedures and the use of technology. The students will further appreciate the guides for carrying out the lengthier computational procedures with illustrative examples integrated into the discussion. Features of the Second Edition: Emphasizes motivation, a basic understanding of the mathematics, modeling and use of technology A layered approach that allows for a flexible presentation based on instructor's preferences and students’ abilities An instructor’s guide suggesting how the text can be applied to different courses New chapters on more advanced numerical methods and systems (including the Runge-Kutta method and the numerical solution of second- and higher-order equations) Many additional exercises, including two "chapters" of review exercises for first- and higher-order differential equations An extensive on-line solution manual About the author: Kenneth B. Howell earned bachelor’s degrees in both mathematics and physics from Rose-Hulman Institute of Technology, and master’s and doctoral degrees in mathematics from Indiana University. For more than thirty years, he was a professor in the Department of Mathematical Sciences of the University of Alabama in Huntsville. Dr. Howell published numerous research articles in applied and theoretical mathematics in prestigious journals, served as a consulting research scientist for various companies and federal agencies in the space and defense industries, and received awards from the College and University for outstanding teaching. He is also the author of Principles of Fourier Analysis, Second Edition (Chapman & Hall/CRC, 2016).

Fundamentals of Maxwel's Kinetic Theory of a Simple Monatomic Gas 1980-02-13 Fundamentals of Maxwel's Kinetic Theory of a Simple Monatomic Gas

Enterprise Web 2.0 Fundamentals Krishna Sankar 2009-04-17 An introduction to next-generation web technologies This is a comprehensive, candid introduction to Web 2.0 for every executive, strategist, technical professional, and marketer who needs to understand its implications. The authors illuminate the technologies that make Web 2.0 concepts accessible and systematically identify the business and technical best practices needed to make the most of it. You’ll gain a clear understanding of what’s really new about Web 2.0 and what isn’t. Most important, you’ll learn how Web 2.0 can help you enhance collaboration, decision-making, productivity, innovation, and your key enterprise initiatives. The authors cut through the hype that surrounds Web 2.0 and help you identify the specific innovations most likely to deliver value in your organization. Along the way, they help you assess, plan for, and profit from user-generated content, Rich Internet Applications (RIA), social networking, semantic web, content aggregation, cloud computing, the Mobile Web, and much more. This is the only book on Web 2.0 that: Covers Web 2.0 from the perspective of every participant and stakeholder, from consumers to product managers to technical professionals Provides a view of both the underlying technologies and the potential applications to bring you up to speed and spark creative ideas about how to apply Web 2.0 Introduces Web 2.0 business applications that work, as demonstrated by actual Cisco® case studies Offers detailed, expert insights into the technical infrastructure and development practices raised by Web 2.0 Previews tomorrow’s emerging innovations—including “Web 3.0,” the Semantic Web Provides up-to-date references, links, and pointers for exploring Web 2.0 first-hand Krishna Sankar, Distinguished Engineer in the Software Group at Cisco, currently focuses on highly scalable Web architectures and frameworks, social and knowledge graphs, collaborative social networks, and intelligent inferences. Susan A. Bouchard is a senior manager with US-Canada Sales Planning and Operations at Cisco. She focuses on Web 2.0 technology as part of the US-Canada collaboration initiative. Understand Web 2.0’s foundational concepts and component technologies Discover today’s best business and technical practices for profiting from Web 2.0 and Rich Internet Applications (RIA) Leverage cloud computing, social networking, and user-generated content Understand the infrastructure scalability and development practices that must be address-ed for Web 2.0 to work Gain insight into how Web 2.0 technologies are deployed inside Cisco and their business value to employees, partners, and customers This book is part of the Cisco Press® Fundamentals Series. Books in this series introduce networking professionals to new networking technologies, covering network topologies, example deployment concepts, protocols, and management techniques. Category: General Networking Covers: Web 2.0

Learning-based VANET Communication and Security Techniques Liang Xiao 2018-10-29 This timely book provides broad coverage of vehicular ad-hoc network (VANET) issues, such as security, and network selection. Machine learning based methods are applied to solve these issues. This book also includes four rigorously refereed chapters from prominent international researchers working in this subject area. The material serves as a useful reference for researchers, graduate students, and practitioners seeking solutions to VANET communication and security related issues. This book will also help readers understand how to use machine learning to address the security and communication challenges in VANETs. Vehicular ad-hoc networks (VANETs) support vehicle-to-vehicle communications and vehicle-to-infrastructure communications to improve the transmission security, help build unmanned-driving, and support booming applications of onboard units (OBUs). The high mobility of OBUs and the large-scale dynamic network with fixed roadside units (RSUs) make the VANET vulnerable to jamming. The anti-jamming communication of VANETs can be significantly improved by using unmanned aerial vehicles (UAVs) to relay the OBU message. UAVs help relay the OBU message to improve the signal-to-interference-plus-noise-ratio of the OBU signals, and thus reduce the bit-error-rate of the OBU message, especially if the serving RSUs are blocked by jammers and/or interference, which is also demonstrated in this book. This book serves as a useful reference for researchers, graduate students, and practitioners seeking solutions to VANET communication and security related issues.

Airline Revenue Management Curt Cramer 2021-11-10 The book provides a comprehensive overview of current practices and future directions in airline revenue management. It explains state-of-the-art revenue management approaches and outlines how these will be augmented and enhanced through modern data science and machine learning methods in the future. Several practical examples and applications will make the reader familiar with the relevance of the corresponding ideas and concepts for an airline commercial organization. The book is ideal for both

students in the field of airline and tourism management as well as for practitioners and industry experts seeking to refresh their knowledge about current and future revenue management approaches, as well as to get an introductory understanding of data science and machine learning methods. Each chapter closes with a checkpoint, allowing the reader to deepen the understanding of the contents covered.This textbook has been recommended and developed for university courses in Germany, Austria and Switzerland.

Cisco Network Design Solutions for Small-medium Businesses Peter Rybaczyk 2005 Master the design and deployment of small and medium-sized business networks.

Law, Bubbles, and Financial Regulation Erik Gerding 2013-12-04 Financial regulation can fail when it is needed the most. The dynamics of asset price bubbles weaken financial regulation just as financial markets begin to overheat and the risk of crisis spikes. At the same time, the failure of financial regulations adds further fuel to a bubble. This book examines the interaction of bubbles and financial regulation. It explores the ways in which bubbles lead to the failure of financial regulation by outlining five dynamics, which it collectively labels the "Regulatory Instability Hypothesis." . The book concludes by outlining approaches to make financial regulation more resilient to these dynamics that undermine law.

Model-Based Testing of Automotive HMIs with Consideration for Product Variability Linshu Duan 2012-07-20 Die Mensch-Maschine-Schnittstellen (HMIs) von Infotainmentsystemen der heutigen Premiumfahrzeuge sind sehr komplexe und eingebettete Systeme. Sie haben im Vergleich mit herkömmlichen PC-Applikationen besondere Eigenschaften, insbesondere bezogen auf ihre Variabilität. Die Variabilität von Infotainmentsystem HMIs ergibt sich aus unterschiedlichen Fahrzeugmodellen, Produktserien, Märkten, Ausstattungen, System- sowie Sprachvarianten. Die hohe Anzahl der Varianten führt zu enorm hohem Testaufwand. Modellbasiertes Testen ist ein vielversprechender Ansatz, um den Testaufwand durch die automatische Testfallgenerierung und Testausführung zu reduzieren und gleichzeitig die Testabdeckung zu erhöhen. Während modellbasiertes Testen bereits für Funktionstests häufig eingesetzt wird, bleiben HMI Tests meist noch manuell oder teil-automatisiert. Außerdem kann durch manuelles Testen eine systematische Testabdeckung nur sehr schwierig erreicht werden. Zahlreiche Forschungsarbeiten befassen sich mit dem GUI-Testen. Variabilität ist im Bereich der Software-Produktentwicklung ein immer beliebteres Forschungsthema. Ein modellbasierter Testansatz für komplexe HMIs mit Berücksichtigung der Variabilität ist allerdings immer noch nicht vorhanden. Diese Doktorarbeit präsentiert eine modellbasierte Testmethode für Infotainmentsystem HMIs mit dem besonderen Ziel das Variabilitätsproblem zu lösen. Zusätzlich bietet diese Doktorarbeit eine Basis für zukünftiges HMI-Testen in der Industrie an. Der Ansatz in dieser Doktorarbeit basiert auf einem modellbasiertem HMI-Testframework, das zwei essentielle Komponenten beinhaltet: eine Test-orientierte Spezi?kation und eine Komponente zur Testgenerierung. Die Test-orientierte Spezi?kation hat eine geschichtete Struktur und ist darauf ausgerichtet, die fürs Testen relevanten Daten zu spezi?zieren. Sowohl dynamisches Menüverhalten als auch die Darstellung des HMI sind die Testziele. Die Testgenerierung erzeugt automatisch Tests aus der Test-orientierten HMI Spezi?kation. Das Testframework kann um eine automatische Testausführung erweitert werden. Nachdem die generierten Tests instanziiert werden, ist es möglich, sie automatisch innerhalb eines Testautomatisierungsframeworks durchzuführen. Diese Doktorarbeit befasst sich mit Methoden, um die HMI-Varianten effizient zu spezifizieren und zu testen und basiert auf Ansatz für Software Produktlinien. Das bedeutet, die Test-orientierte Spezi?kation ist erweitert um sowohl die Gemeinsamkeiten als auch die Spezialitäten der Varianten zu beschreiben. Insbesondere werden Strategien entwickelt, um Tests für unterschiedliche Varianten der Produktlinien automatisch zu generieren. Die Besonderheit dabei ist, dass Redundanzen sowohl für den Generierungsvorgang als auch den Ausführungsvorgang vermieden werden können. Das ist wegen den eingeschränkten Ressourcen und aus Effizienzsgründen besonders wichtig für die Industrie. Die Modellierung und das Testen von variantenreichen HMIs stellen die Hauptbeiträge dieser Dissertation dar. Die Ergebnisse dieser Doktorarbeit können hoffentlich als eine Lösung für modellbasiertes Testen der multi-varianten HMIs dienen und der Automotive-Industrie eine Basis der zukünftigen HMI Testenstandards liefern. The human-machine interfaces (HMIs) of today's premium automotive infotainment systems are complex embedded systems which have special characteristics in comparison to GUIs of standard PC applications, in particular regarding their variability. The variability of infotainment system HMIs results from different car models, product series, markets, equipment configuration possibilities, system types and languages and necessitates enormous testing efforts. The model-based testing approach is a promising solution for reducing testing efforts and increasing test coverage. However, while model-based testing has been widely used for function tests of subsystems in practice, HMI tests have remained manual or only semi-automated and are very time-consuming and work-intensive. Also, it is very difficult to achieve systematic or high test coverage via manual tests. A large amount of research work has addressed GUI testing in recent years. In addition, variability is becoming an ever more popular topic in the domain of software product line development. However, a model-based testing approach for complex HMIs which also considers variability is still lacking. This thesis presents a modelbased testing approach for infotainment system HMIs with the particular aim of resolving the variability problem. Furthermore, the thesis provides a foundation for future standards of HMI testing in practice. The proposed approach is based on a model-based HMI testing framework which includes two essential components: a test-oriented HMI specification and a test generation component. The test-oriented HMI specification has a layered structure and is suited to specifying data which is required for testing different features of the HMI. Both the dynamic behavior and the representation of the HMI are the testing focuses of this thesis. The test generation component automatically generates tests from the test-oriented HMI specification. Furthermore, the framework can be extended in order to automatically execute the generated tests. Generated tests must first be initialized, which means that they are enhanced with concrete user input data. Afterwards, initialized tests can be automatically executed with the help of a test execution tool which must be extended into the testing framework. In this thesis, it is proposed to specify and test different HMI-variants which have a large set of commonalities based on the software product line approach. This means the test-oriented HMI specification is extended in order to describe the commonalities and variabilities between HMI variants of an HMI product line. In particular, strategies are developed in order to generate tests for different HMI products. One special feature is that redundancies are avoided both for the test generation and the execution processes. This is especially important for the industrial practice due to limited test resources. Modeling and testing variability of automotive HMIs make up the main research contributions of this thesis. We hope that the results presented in this thesis will offer GUI testing research a solution for model-based testing of multi-variant HMIs and provide the automotive industry with a foundation for future HMI testing standards.

The Future of Federalism in the 1980s 1981

ESD Basics Steven H. Voldman 2012-08-22 Electrostatic discharge (ESD) continues to impact semiconductormanufacturing, semiconductor components and systems, astechnologies scale from micro- to nano electronics. This bookintroduces the fundamentals of ESD, electrical overstress (EOS),electromagnetic interference (EMI), electromagnetic compatibility(EMC), and latchup, as well as provides a coherent overview of thesemiconductor manufacturing environment and the final systemassembly. It provides an illuminating look into the integration ofESD protection networks followed by examples in specifictechnologies, circuits, and chips. The text is unique in covering semiconductor chip manufacturingissues, ESD semiconductor chip design, and system problemsconfronted today as well as the future of ESD phenomena andnano-technology. Look inside for extensive coverage on: The fundamentals of electrostatics, triboelectric charging, andhow they relate to present day manufacturing environments ofmicro-electronics to nano-technology Semiconductor manufacturing handling and auditing processing toavoid ESD failures ESD, EOS, EMI, EMC, and latchup semiconductor component andsystem level testing to demonstrate product resilience from humanbody model (HBM), transmission line pulse (TLP), charged devicemodel (CDM), human metal model (HMM), cable discharge events (CDE),to system level IEC 61000-4-2 tests ESD on-chip design and process manufacturing practices andsolutions to improve ESD semiconductor chip solutions, alsopractical off-chip ESD protection and system level solutions toprovide more robust systems System level concerns in servers, laptops, disk drives, cellphones, digital cameras, hand held devices, automobiles, and spaceapplications Examples of ESD design for state-of-the-art technologies,including CMOS, BiCMOS, SOI, bipolar technology, high voltage CMOS(HVCMOS), RF CMOS, smart power, magnetic recording technology,micro-machines (MEMs) to nano-structures ESD Basics: From Semiconductor Manufacturing to ProductUse complements the author's series of books on ESDprotection. For those new to the field, it is an essentialreference and a useful insight into the issues that confront moderntechnology as we enter the Nano-electronic Era.

Technology Valuation Solutions F. Peter Boer 2004-09-23 A better way to value the profitability and risk of R&D projects New technology and R&D initiatives affect companies in both the service and manufacturing sector. It's estimated that half a trillion dollars is spent worldwide each year on such efforts. Technology Valuation Solutions + website offers a methodology along with illustrative cases for valuing the profitability and risk of R&D projects. A companion to Boer's earlier work, The Valuation of Technology (978-0-471-31638-1), this book provides additional material that will help readers assess a wide variety of projects and business scenarios. In addition to the in-depth case studies, this book includes a website featuring valuation templates that readers can customize for their own individual needs.

Mosby's Fundamentals of Therapeutic Massage - E-Book Sandy Fritz 2013-12-27 For success in practice, Mosby's Fundamentals of Therapeutic Massage, 5th Edition provides you with a solid foundation in the fundamentals of massage therapy. Expert author Sandy Fritz shares her wealth of clinical expertise, keeping a consistent focus on clinical reasoning with an increased emphasis on competency-based outcomes. In addition to teaching you how to skillfully apply massage techniques, this text also covers important practice management topics such as ethics, legal issues, sanitation, hygiene, business practices, and professional development. Two DVDs bound in the book provide over three hours of video on techniques, body mechanics, case studies, and more, plus anatomy and physiology animations. Log in to the companion Evolve website for interactive games and learning exercises. Hundreds of full-color photos and illustrations visually clarify key concepts and

demonstrate proper technique, draping procedures, body mechanics, and more. A combined workbook/textbook format encourages critical thinking with activities, short essays, fill-in-the-blank questions, labeling exercises, and more to help you review concepts from the book. General Protocol sections in the book, on the Evolve website, and on the companion DVD provide a guide for assessment and massage application, intervention and positioning recommendations, and a modifiable, step-by-step sequence to help you learn to develop care plans for specific clients. Electronic documentation coverage prepares you for today's increasingly digital workplace with examples from electronic record-keeping and office management software programs. Comprehensive coverage of content covered on the National Certification Exam (NCE), the National Certification Exam for Therapeutic Massage and Bodywork (NCETMB), and the Massage and Bodywork Licensing Examination (MBLEx) ensures you are ready to pass certification and licensure exams. Updated insurance reimbursement section features discussions of insurance procedures, appropriate charting, necessary paperwork, and how to manage reimbursement. Expanded massage therapy career content discusses the many career tracks available to massage therapists. Detailed Body Mechanics chapter addresses the use of proper body mechanics for a long and successful career and the most effective treatment. Practical Case Studies chapter offers case studies that help you understand how to apply key concepts to real-world clinical practice. Completely updated content keeps you current with the latest information needed to pass your exams and succeed in practice. NEW! Foot in the Door feature throughout the text outlines the professional traits valued by prospective employers. Available as a Pageburst digital textbook with additional interactive learning tools and electronic assets. Sold separately.

Nature-Inspired Algorithms for Big Data Frameworks Banati, Hema 2018-09-28 As technology continues to become more sophisticated, mimicking natural processes and phenomena becomes more of a reality. Continued research in the field of natural computing enables an understanding of the world around us, in addition to opportunities for manmade computing to mirror the natural processes and systems that have existed for centuries. Nature-Inspired Algorithms for Big Data Frameworks is a collection of innovative research on the methods and applications of extracting meaningful information from data using algorithms that are capable of handling the constraints of processing time, memory usage, and the dynamic and unstructured nature of data. Highlighting a range of topics including genetic algorithms, data classification, and wireless sensor networks, this book is ideally designed for computer engineers, software developers, IT professionals, academicians, researchers, and upper-level students seeking current research on the application of nature and biologically inspired algorithms for handling challenges posed by big data in diverse environments.

Solvent Extraction Vladimir S Kislik I 2011-08-31 The main challenge in modern solvent extraction separation is that most techniques are mainly empirical, specific and particular for narrow fields of practice and require a large degree of experimentation. This concise and modern book provides a complete overview of both solvent extraction separation techniques and the novel and unified competitive complexation/solvation theory. This novel and unified technique presented in the book provides a key for a preliminary quantitative prediction of suitable extraction systems without experimentation, thus saving researchers time and resources. Analyzes and compares both classical and new competitive models and techniques Offers a novel and unified competitive complexation / solvation theory that permits researchers to standardize some parameters, which decreases the need for experimentation at R&D Presents examples of applications in multiple disciplines such as chemical, biochemical, radiochemical, pharmaceutical and analytical separation Written by an outstanding scientist who is prolific in the field of separation science

Vehicular ad hoc Networks Claudia Campolo 2015-06-01 This book presents vehicular ad-hoc networks (VANETs) from the their onset, gradually going into technical details, providing a clear understanding of both theoretical foundations and more practical investigation. The editors gathered top-ranking authors to provide comprehensiveness and timely content; the invited authors were carefully selected from a list of who's who in the respective field of interest: there are as many from Academia as from Standardization and Industry sectors from around the world. The covered topics are organized around five Parts starting from an historical overview of vehicular communications and standardization/harmonization activities (Part I), then progressing to the theoretical foundations of VANETs and a description of the day-one standard-compliant solutions (Part II), hence going into details of vehicular networking and security (Part III) and to the tools to study VANETs, from mobility and channel models, to network simulators and field trial methodologies (Part IV), and finally looking into the future of VANETs by investigating alternative, complementary communication technologies, innovative networking paradigms and visionary applications (Part V). The way the content is organized, with a differentiated level of technical details, makes the book a valuable reference for a large pool of target readers ranging from undergraduate, graduate and PhD students, to wireless scientists and engineers, to service providers and stakeholders in the automotive, ITS, ICT sectors.

Applications of Heat, Mass and Fluid Boundary Layers R. O. Fagbenle 2020-02 Applications of Heat, Mass and Fluid Boundary Layers brings together the latest research on boundary layers where there has been remarkable advancements in recent years. This book highlights relevant concepts and solutions to energy issues and environmental sustainability by combining fundamental theory on boundary layers with real-world industrial applications from, among others, the thermal, nuclear and chemical industries. The book's editors and their team of expert contributors discuss many core themes, including advanced heat transfer fluids and boundary layer analysis, physics of fluid motion and viscous flow, thermodynamics and transport phenomena, alongside key methods of analysis such as the Merk-Chao-Fagbenle method. This book's multidisciplinary coverage will give engineers, scientists, researchers and graduate students in the areas of heat, mass, fluid flow and transfer a thorough understanding of the technicalities, methods and applications of boundary layers, with a unified approach to energy, climate change and a sustainable future. Presents up-to-date research on boundary layers with very practical applications across a diverse mix of industries Includes mathematical analysis to provide detailed explanation and clarity Provides solutions to global energy issues and environmental sustainability

Fundamentals of Agricultural and Field Robotics Manoj Karkee 2021 Over the past century, mechanization has been an important means for optimizing resource utilization, improving worker health and safety and reducing labor requirements in farming while increasing productivity and quality of 4F (Food, Fuel, Fiber, Feed). Recognizing this contribution, agricultural mechanization was considered as one of the top ten engineering achievements of 20th century by the National Academy of Engineering. Accordingly farming communities have adopted increasing level of automation and robotics to further improve the precision management of crops (including input resources), increase productivity and reduce farm labor beyond what has been possible with conventional mechanization technologies. It is more important than ever to continue to develop and adopt novel automation and robotic solutions into farming so that some of the most complex agricultural tasks, which require huge amount of seasonal labor such as fruit and vegetable harvesting, could be automated while meeting the rapidly increasing need for 4F. In addition, continual innovation in and adoption of agricultural automation and robotic technologies is essential to minimize the use of depleting resources including water, minerals and other chemicals so that sufficient amount of safe and healthy food can be produced for current generation while not compromising the potential for the future generation. This book aims at presenting the fundamental principles of various aspects of automation and robotics as they relate to production agriculture (the branch of agriculture dealing with farming operations from field preparation to seeding, to harvesting and field logistics). The building blocks of agricultural automation and robotics that are discussed in the book include sensing and machine vision, control, guidance, manipulation and end-effector technologies. The fundamentals and operating principles of these technologies are explained with examples from cutting-edge research and development currently going on around the word. This book brings together scientists, engineers, students and professionals working in these and related technologies to present their latest examples of agricultural automation and robotics research, innovation and development while explaining the fundamentals of the technology. The book, therefore, benefits those who wish to develop novel agricultural engineering solutions and/or to adopt them in the future. .

Developments in Wireless Network Prototyping, Design, and Deployment: Future Generations Matin, Mohammad A. 2012-06-30 "This book highlights the current design issues in wireless networks, informing scholars and practitioners about advanced prototyping innovations in this field"--