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**Cyber-security of SCADA and Other Industrial Control Systems** Edward J. M. Colbert 2016-08-23 This book provides a comprehensive overview of the fundamental security of Industrial Control Systems (ICSs), including Supervisory Control and Data Acquisition (SCADA) systems and touching on cyber-physical systems in general. Careful attention is given to providing the reader with clear and comprehensive background and reference material for each topic pertinent to ICS security. This book offers answers to such questions as: Which specific operating and security issues may lead to a loss of efficiency and operation? What methods can be used to monitor and protect my system? How can I design my system to reduce threats? This book offers chapters on ICS cyber threats, attacks, metrics, risk, situational awareness, intrusion detection, and security testing, providing an advantageous reference set for current system owners who wish to securely configure and operate their ICSs. This book is appropriate for non-specialists as well. Tutorial information is provided in two initial chapters and in the beginnings of other chapters as needed. The book concludes with advanced topics on ICS governance, responses to attacks on ICS, and future security of the Internet of Things.

**Computer Networking** Textbook Equity Edition 2014-03 This open textbook aims to fill the gap between the open-source implementations and the open-source network specifications by providing a detailed but pedagogical description of the key principles that guide the operation of the Internet. The book is released under a creative commons license. Such an open-source license is motivated by two reasons. The first is that we hope that this will allow many students to use the book to learn computer networks. The second is that I hope that other teachers will reuse, adapt and improve it. Time will tell if it is possible to build a community of contributors to improve and develop the book further. As a starting point, the first release contains all the material for a one-semester first upper undergraduate or a graduate networking course.

**Network Security, Firewalls and VPNs** J. Michael Stewart 2013-07-15 PART OF THE NEW JONES & BARTLETT LEARNING INFORMATION SYSTEMS SECURITY & ASSURANCE SERIES Fully revised and updated with the latest data from the field, Network Security, Firewalls, and VPNs, Second Edition provides a unique, in-depth look at the major business challenges and threats that are introduced when an organization's network is connected to the public Internet. Written by an industry expert, this book provides a comprehensive explanation of network security basics, including how hackers access online networks and the use of Firewalls and VPNs to provide security countermeasures. Using examples and exercises, this book incorporates hands-on activities to prepare the reader to disarm threats and prepare for emerging technologies and future attacks. Key Features: -Introduces the basics of

network security exploring the details of firewall security and how VPNs operate - Illustrates how to plan proper network security to combat hackers and outside threats -Discusses firewall configuration and deployment and managing firewall security -Identifies how to secure local and internet communications with a VPN Instructor Materials for Network Security, Firewalls, VPNs include: PowerPoint Lecture Slides Exam Questions Case Scenarios/Handouts About the Series This book is part of the Information Systems Security and Assurance Series from Jones and Bartlett Learning. Designed for courses and curriculums in IT Security, Cybersecurity, Information Assurance, and Information Systems Security, this series features a comprehensive, consistent treatment of the most current thinking and trends in this critical subject area. These titles deliver fundamental information-security principles packed with real-world applications and examples. Authored by Certified Information Systems Security Professionals (CISSPs), they deliver comprehensive information on all aspects of information security. Reviewed word for word by leading technical experts in the field, these books are not just current, but forward-thinking putting you in the position to solve the cybersecurity challenges not just of today, but of tomorrow, as well."

**Embedded Software** Jean J. Labrosse 2008 The Newnes Know It All Series takes the best of what our authors have written to create hard-working desk references that will be an engineer's first port of call for key information, design techniques and rules of thumb. Guaranteed not to gather dust on a shelf! Embedded software is present everywhere – from a garage door opener to implanted medical devices to multicore computer systems. This book covers the development and testing of embedded software from many different angles and using different programming languages. Optimization of code, and the testing of that code, are detailed to enable readers to create the best solutions on-time and on-budget. Bringing together the work of leading experts in the field, this a comprehensive reference that every embedded developer will need! Chapter 1: Basic Embedded Programming Concepts Chapter 2: Device Drivers Chapter 3: Embedded Operating Systems Chapter 4: Networking Chapter 5: Error Handling and Debugging Chapter 6: Hardware/Software Co-Verification Chapter 7: Techniques for Embedded Media Processing Chapter 8: DSP in Embedded Systems Chapter 9: Practical Embedded Coding Techniques Chapter 10: Development Technologies and Trends \*Proven, real-world advice and guidance from such "name? authors as Tammy Noergard, Jen LaBrosse, and Keith Curtis \*Popular architectures and languages fully discussed \*Gives a comprehensive, detailed overview of the techniques and methodologies for developing effective, efficient embedded software

**Creative Rationality and Innovation** Joelle Forest 2018-01-03 This book urges us to be creative in our way of thinking about innovation. Adopting an artificial

perspective, the author emphasizes creative rationality: a form of thought that encourages knowledge crossing and invites an adventurous transgression. The question of how such a form of thought might be developed is addressed through a detailed examination of the educational system. The book frees itself from many of the myths that surround innovation, including the predominance of what the author calls the linear and hierarchical model.

**Forrest Mims Engineer's Notebook** Forrest Mims 1992-08-15 The book features: carefully hand-drawn circuit illustrations hundreds of fully tested circuits tutorial on electronics basics tips on part substitutions, design modifications, and circuit operation All covering the following areas: Review of the Basics Digital Integrated Circuits MOS/CMOS Integrated Circuits TTL/LS Integrated Circuits Linear Integrated Circuits Index of Integrated Circuits Index of Circuit Applications

Contextualizing Translation Theories Ali Almanna 2015-09-10 Contextualizing Translation Theories: Aspects of Arabic-English Interlingual Communication provides critical readings of available strategies of translating, ranging from the familiar concept of equivalence, to strategies of modulation, domestication, foreignization and mores of translation. As such, this volume demonstrates to the reader the pros and cons of each of these strategies within a theoretical context that is augmented by translational tasks and examples, most derived from actual textual data.

Parallel Computer Architecture David E. Culler 1999 This book outlines a set of issues that are critical to all of parallel architecture--communication latency, communication bandwidth, and coordination of cooperative work (across modern designs). It describes the set of techniques available in hardware and in software to address each issues and explore how the various techniques interact.

**Linux Bible** Christopher Negus 2012-09-07 More than 50 percent new and revised content for today's Linux environment gets you up and running in no time! Linux continues to be an excellent, low-cost alternative to expensive operating systems. Whether you're new to Linux or need a reliable update and reference, this is an excellent resource. Veteran bestselling author Christopher Negus provides a complete tutorial packed with major updates, revisions, and hands-on exercises so that you can confidently start using Linux today. Offers a complete restructure, complete with exercises, to make the book a better learning tool Places a strong focus on the Linux command line tools and can be used with all distributions and versions of Linux Features in-depth coverage of the tools that a power user and a Linux administrator need to get started This practical learning tool is ideal for anyone eager to set up a new Linux desktop system at home or curious to learn how to manage Linux server systems at work.

The Oxford Handbook of American Bureaucracy Robert F. Durant 2012-08-02 One of the major dilemmas facing the administrative state in the United States today is discerning how best to harness for public purposes the dynamism of markets, the passion and commitment of nonprofit and volunteer organizations, and the public-interest-oriented expertise of the career civil service. Researchers across a variety of disciplines, fields, and subfields have independently investigated aspects of the formidable challenges, choices, and opportunities this dilemma poses for governance, democratic constitutionalism, and theory building. This literature is vast, affords multiple and conflicting perspectives, is methodologically diverse, and is fragmented. The Oxford Handbook of American Bureaucracy affords readers an uncommon overview and integration of this eclectic body of knowledge as adduced by many of its most respected researchers. Each of

the chapters identifies major issues and trends, critically takes stock of the state of knowledge, and ponders where future research is most promising. Unprecedented in scope, methodological diversity, scholarly viewpoint, and substantive integration, this volume is invaluable for assessing where the study of American bureaucracy stands at the end of the first decade of the 21st century, and where leading scholars think it should go in the future. The Oxford Handbooks of American Politics are a set of reference books offering authoritative and engaging critical overviews of the state of scholarship on American politics. Each volume focuses on a particular aspect of the field. The project is under the General Editorship of George C. Edwards III, and distinguished specialists in their respective fields edit each volume. The Handbooks aim not just to report on the discipline, but also to shape it as scholars critically assess the scholarship on a topic and propose directions in which it needs to move. The series is an indispensable reference for anyone working in American politics. General Editor for The Oxford Handbooks of American Politics: George C. Edwards III

**Principles of Pragmatics** Geoffrey N. Leech 2016-02-17 Over the years, pragmatics - the study of the use and meaning of utterances to their situations - has become a more and more important branch of linguistics, as the inadequacies of a purely formalist, abstract approach to the study of language have become more evident. This book presents a rhetorical model of pragmatics: that is, a model which studies linguistic communication in terms of communicative goals and principles of 'good communicative behaviour'. In this respect, Geoffrey Leech argues for a rapprochement between linguistics and the traditional discipline of rhetoric. He does not reject the Chomskian revolution of linguistics, but rather maintains that the language system in the abstract - i.e. the 'grammar' broadly in Chomsky's sense - must be studied in relation to a fully developed theory of language use. There is therefore a division of labour between grammar and rhetoric, or (in the study of meaning) between semantics and pragmatics. The book's main focus is thus on the development of a model of pragmatics within an overall functional model of language. In this it builds on the speech act theory of Austin and Searle, and the theory of conversational implicature of Grice, but at the same time enlarges pragmatics to include politeness, irony, phatic communion, and other social principles of linguistic behaviour.

**Global Trends 2040** National Intelligence Council 2021-03 "The ongoing COVID-19 pandemic marks the most significant, singular global disruption since World War II, with health, economic, political, and security implications that will ripple for years to come." -Global Trends 2040 (2021) Global Trends 2040-A More Contested World (2021), released by the US National Intelligence Council, is the latest report in its series of reports starting in 1997 about megatrends and the world's future. This report, strongly influenced by the COVID-19 pandemic, paints a bleak picture of the future and describes a contested, fragmented and turbulent world. It specifically discusses the four main trends that will shape tomorrow's world: - Demographics-by 2040, 1.4 billion people will be added mostly in Africa and South Asia. - Economics-increased government debt and concentrated economic power will escalate problems for the poor and middleclass. - Climate-a hotter world will increase water, food, and health insecurity. - Technology-the emergence of new technologies could both solve and cause problems for human life. Students of trends, policymakers, entrepreneurs, academics, journalists and anyone eager for a glimpse into the next decades, will find this report, with colored graphs, essential reading.

**Aircraft Digital Electronic and Computer Systems** Michael H. Tooley 2007 'Aircraft

Digital Electronic and Computer Systems' provides an introduction to the principles of this subject. It is written for anyone pursuing a career in aircraft maintenance engineering or a related aerospace engineering discipline.

**Oracle 12c: SQL** Joan Casteel 2015-09-08 Introduce the latest version of the fundamental SQL language used in all relational databases today with Casteel's ORACLE 12C: SQL, 3E. Much more than a study guide, this edition helps those who have only a basic knowledge of databases master the latest SQL and Oracle concepts and techniques. Learners gain a strong understanding of how to use Oracle 12c SQL most effectively as they prepare for the first exam in the Oracle Database Administrator or Oracle Developer Certification Exam paths. This edition initially focuses on creating database objects, including tables, constraints, indexes, sequences, and more. The author then explores data query techniques, such as row filtering, joins, single-row functions, aggregate functions, subqueries, and views, as well as advanced query topics. ORACLE 12C: SQL, 3E introduces the latest features and enhancements in 12c, from enhanced data types and invisible columns to new CROSS and OUTER APPLY methods for joins. To help readers transition to further studies, appendixes introduce SQL tuning, compare Oracle's SQL syntax with other databases, and overview Oracle connection interface tools: SQL Developer and SQL Plus. Readers can trust ORACLE 12C: SQL, 3E to provide the knowledge for Oracle certification testing and the solid foundation for pursuing a career as a successful database administrator or developer. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

**Roark's Formulas for Stress and Strain** Warren Clarence Young 2002 The ultimate resource for designers, engineers, and analyst working with calculations of loads and stress.

**The Great Lockdown** Shivaji Das 2021-11-23 A collection of insider accounts describing the organizational impact of COVID-19 In The Great Lockdown: Lessons Learned During the Pandemic from Organizations Around the Globe, expert strategists Shivaji Das, Aroop Zutshi , and Janesh Janardhanan deliver an insightful exploration of this once-in-a-lifetime event to unearth invaluable learnings for the future. Told through the experiences of CXOs at billion-dollar companies, star start-ups, and non-profits from around the world, the book chronicles the ups and downs of sophisticated organizations as they navigated the COVID-19 crisis through initiatives impacting people, processes, and technology. Revealing case studies contributed by the CXOs of companies spanning multiple geographies - from the USA to Iran, Uganda to Hong Kong, and multiple sectors - social media, technology, aviation, luxury retail, healthcare, etc. Incisive analyses of the techniques and strategies that worked-or didn't-for organizations during the COVID-19 pandemic, covering the role and evolution of leadership, organizational culture, innovation and digitization Practical guidance for business leaders to apply to their own firms in times of great economic upheaval: the next pandemic, climate disasters, cyber-attacks The leaders contributing their organization's survival and revival stories include those from Julius Baer, SAP, Terumo, IndiGrid, Tapsi, Fonterra, Hornet Networks, Globalization Partners, beCuriou, GoGoX, Abacus Pharma, Real Wear Inc, SOS Children's Villages, Bangalore International Airport, and A Lange & Sohne. Perfect for executives, managers, and other business leaders, The Great Lockdown is an invaluable addition to the libraries of anyone interested in case studies of corporate resilience and endurance in the face of unprecedented economic challenges.

**The Pragmatics of Politeness** Geoffrey N. Leech 2014 This readable book presents a

new general theoretical understanding of politeness. It offers an account of a wide range of politeness phenomena in English, illustrated by hundreds of examples of actual language use taken largely from authentic British and American sources. Building on his earlier pioneering work on politeness, Geoffrey Leech takes a pragmatic approach that is based on the controversial notion that politeness is communicative altruism. Leech's 1983 book, Principles of Pragmatics, introduced the now widely-accepted distinction between pragmalinguistic and sociopragmatic aspects of politeness; this book returns to the pragmalinguistic side, somewhat neglected in recent work. Drawing on neo-Gricean thinking, Leech rejects the prevalent view that it is impossible to apply the terms 'polite' or 'impolite' to linguistic phenomena. Leech covers all major speech acts that are either positively or negatively associated with politeness, such as requests, apologies, compliments, offers, criticisms, good wishes, condolences, congratulations, agreement, and disagreement. Additional chapters deal with impoliteness and the related phenomena of irony ("mock politeness") and banter ("mock impoliteness"), and with the role of politeness in the learning of English as a second language. A final chapter takes a fascinating look at more than a thousand years of history of politeness in the English language. Readership: Graduate students and researchers in linguistics (especially sociolinguistics) as well those in sociology, social psychology, and anthropology.

**Radio Communication Handbook** 1982

**Mentor Myth** Debby Carreau 2016-11-03 Mentors are over-utilized, under-trained and, as studies show, under-deliver. From an employer's perspective, assigning a mentor is often a band-aid to a larger problem. From an employee's perspective, a lack of formal mentorship is seen as a serious, career-inhibiting problem, the equivalent of sailing a boat without a rudder. In The Mentor Myth, Debby Carreau represents this dichotomy, explaining that while a mentor's counsel can be invaluable, it is not the silver bullet human resources professionals often purport it to be. The opinions of a mentor are one data point, one piece in the much more complex game of navigating a career. In fact, the increasing overreliance on mentorship can actually be a hindrance to a successful career. Instead of continually looking outward for career guidance, aspiring professionals must realize that they possess all the tools necessary to take control of their own careers by using their own strengths, capabilities, and visions of success. Through her years of experience consulting, speaking, and writing about career development, Debby has created a comprehensive, easy-to-implement guide for taking ownership of your professional success. Debby begins by helping the reader create a professional roadmap, including how to build a personal brand, project the right amount of confidence, and manage time. She addresses mentors in the context of networks and sponsors, advising the reader how to incorporate outward influences rather than be defined by them.

**Building Web Apps with WordPress** Brian Messenlehner 2014-04-08 WordPress is much more than a blogging platform. As this practical guide clearly demonstrates, you can use WordPress to build web apps of any type-not mere content sites, but full-blown apps for specific tasks. If you have PHP experience with a smattering of HTML, CSS, and JavaScript, you'll learn how to use WordPress plugins and themes to develop fast, scalable, and secure web apps, native mobile apps, web services, and even a network of multiple WordPress sites. The authors use examples from their recently released SchoolPress app to explain concepts and techniques throughout the book. All code examples are available on GitHub. Compare WordPress with traditional app development frameworks Use themes for views, and plugins for

backend functionality Get suggestions for choosing WordPress plugins—or build your own Manage user accounts and roles, and access user data Build asynchronous behaviors in your app with jQuery Develop native apps for iOS and Android, using wrappers Incorporate PHP libraries, external APIs, and web service plugins Collect payments through ecommerce and membership plugins Use techniques to speed up and scale your WordPress app

Mobile Terminal Receiver Design Sajal Kumar Das 2016-09-26 Combines in one volume the basics of evolving radio access technologies and their implementation in mobile phones Reviews the evolution of radio access technologies (RAT) used in mobile phones and then focuses on the technologies needed to implement the LTE (Long term evolution) capability Coverage includes the architectural aspects of the RF and digital baseband parts before dealing in more detail with some of the hardware implementation Unique coverage of design parameters and operation details for LTE-A phone transceiver Discusses design of multi-RAT Mobile with the consideration of cost and form factors Provides in one book a review of the evolution of radio access technologies and a good overview of LTE and its implementation in a handset Unveils the concepts and research updates of 5G technologies and the internal hardware and software of a 5G phone

**Programming in Objective-C** Stephen G. Kochan 2012 Presents an introduction to Objective-C, covering such topics as classes and objects, data types, program looping, inheritance, polymorphism, variables, memory management, and archiving. *Diagramming the Big Idea* Jeffrey Balmer 2012-06-25 As a beginning design student, you need to learn to think like a designer, to visualize ideas and concepts, as well as objects. In *Diagramming the Big Idea*, Jeffrey Balmer and Michael T. Swisher illustrate how you can create and use diagrams to clarify your understanding of both particular projects and organizing principles and ideas. With accessible, step-by-step exercises that interweave diagrams, drawings and virtual models, the authors clearly show you how to compose meaningful and useful diagrams. As you follow the development of the four project groups drawn from the authors' teaching, you will become familiar with architectural composition concepts such as proportion, site, form, hierarchy and spatial construction. In addition, description and demonstration essays extend concepts to show you more examples of the methods used in the projects. Whether preparing for a desk critique, or any time when a fundamental insight can help to resolve a design problem, this book is your essential studio resource.

*Microcontroller-Based Temperature Monitoring and Control* Dogan Ibrahim 2002-10-08 \*Provides practical guidance and essential theory making it ideal for engineers facing a design challenge or students devising a project \*Includes real-world design guides for implementing a microcontroller-based control systems \*Requires only basic mathematical and engineering background as the use of microcontrollers is introduced from first principles Engineers involved in the use of microcontrollers in measurement and control systems will find this book an essential practical guide, providing design principles and application case studies backed up with sufficient control theory and electronics to develop their own systems. It will also prove invaluable for students and experimenters seeking real-world project work involving the use of a microcontroller. Unlike the many introductory books on microcontrollers Dogan Ibrahim has used his engineering experience to write a book based on real-world applications. A basic mathematical and engineering background is assumed, but the use of microcontrollers is introduced from first principles. *Microcontroller-Based Temperature Monitoring and Control* is an essential and practical guide for all engineers involved in the use

of microcontrollers in measurement and control systems. The book provides design principles and application case studies backed up with sufficient control theory and electronics to develop your own systems. It will also prove invaluable for students and experimenters seeking real-world project work involving the use of a microcontroller. Techniques for the application of microcontroller-based control systems are backed up with the basic theory and mathematics used in these designs, and various digital control techniques are discussed with reference to digital sample theory. The first part of the book covers temperature sensors and their use in measurement, and includes the latest non-invasive and digital sensor types. The second part covers sampling procedures, control systems and the application of digital control algorithms using a microcontroller. The final chapter describes a complete microcontroller-based temperature control system, including a full software listing for the programming of the controller.

*Guide to OSI and TCP/IP Models* Mohammed M. Alani 2014-07-08 This work opens with an accessible introduction to computer networks, providing general definitions of commonly used terms in networking. This is followed by a detailed description of the OSI model, including the concepts of connection-oriented and connectionless communications. The text carefully elaborates the specific functions of each layer, along with what is expected of protocols operating at each layer. Next, the journey of a single packet, from source to destination, is described in detail. The final chapter is devoted to the TCP/IP model, beginning with a discussion of IP protocols and the supporting ARP, RARP and In ARP protocols. The work also discusses the TCP and UDP protocols operating at the transport layer and the application layer protocols HTTP, DNS, FTP, TFTP, SMTP, POP3 and Telnet. Important facts and definitions are highlighted in gray boxes found throughout the text.

Digital and Analog Fiber Optic Communications for CATV and FTTx Applications Avigdor Brillant 2008-01-01 This book is intended to provide a step-by-step guide to all design aspects and tradeoffs from theory to application for fiber-optics transceiver electronics. Presenting a compendium of information in a structured way, this book enables the engineer to develop a methodical design approach, a deep understanding of specifications parameters and the reasons behind them, as well as their effects and consequences on system performance, which are essential for proper component design. Further, a fundamental understanding of RF, digital circuit design, and linear and nonlinear phenomena is important in order to achieve the desired performance levels. Becoming familiar with solid-state devices and passives used to build optical receivers and transmitters is also important so one can effectively overcome design limitations. The book is organized into six main sections covering the following subjects: a top level overview; optics, semiconductors, and passives; RF concepts; an introduction to CATV modems and transmitters; digital transceivers' performance, evaluation, and concepts; and integration and testing. Copublished with Wiley Interscience.

*The Hundred-page Machine Learning Book* Andriy Burkov 2019 Provides a practical guide to get started and execute on machine learning within a few days without necessarily knowing much about machine learning. The first five chapters are enough to get you started and the next few chapters provide you a good feel of more advanced topics to pursue.

*Psychiatry* John Geddes 2012-01-05 Rev. ed. of: *Psychiatry* / Michael Gelder, Richard Mayou, John Geddes. 3rd ed. c2005.

**Helping School Refusing Children and Their Parents** Christopher Kearney 2008-03-19 Children who miss substantial amounts of school pose one of the most vexing problems for school officials. In many cases, school personnel must assess these

students and successfully help them to return to the academic setting. This can be difficult considering most school-based professionals are pressed for time and do not have access to proper resources. The information in this book can help school officials combat absenteeism and reduce overall dropout rates. Designed for guidance counselors, teachers, principals and deans, school psychologists, school-based social workers, and other school professionals, this book outlines various strategies for helping children get back to school with less distress that can easily be implemented in schools. The book describes four clinical interventions that can be used to effectively address moderate cases of absenteeism, as well as instructions for adapting these procedures for use within the school system. A chapter on assessment describes several methods for identifying school refusal behavior, including time-limited techniques for school officials who have little opportunity to conduct detailed evaluations. Worksheets for facilitating assessment are included and can easily be photocopied from the book. Other chapters provide advice for working collaboratively with parents, preventing relapse, and tackling special issues such as children with anxiety, children who take medication, and children who are victims of bullying. Topics such as poverty, homelessness, teenage pregnancy, violence, and school safety are also addressed.

**MongoDB in Action** Kyle Banker 2016-03-29 Summary MongoDB in Action, Second Edition is a completely revised and updated version. It introduces MongoDB 3.0 and the document-oriented database model. This perfectly paced book gives you both the big picture you'll need as a developer and enough low-level detail to satisfy system engineers. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology This document-oriented database was built for high availability, supports rich, dynamic schemas, and lets you easily distribute data across multiple servers. MongoDB 3.0 is flexible, scalable, and very fast, even with big data loads. About the Book MongoDB in Action, Second Edition is a completely revised and updated version. It introduces MongoDB 3.0 and the document-oriented database model. This perfectly paced book gives you both the big picture you'll need as a developer and enough low-level detail to satisfy system engineers. Lots of examples will help you develop confidence in the crucial area of data modeling. You'll also love the deep explanations of each feature, including replication, auto-sharding, and deployment. What's Inside Indexes, queries, and standard DB operations Aggregation and text searching Map-reduce for custom aggregations and reporting Deploying for scale and high availability Updated for Mongo 3.0 About the Reader Written for developers. No previous MongoDB or NoSQL experience is assumed. About the Authors After working at MongoDB, Kyle Banker is now at a startup. Peter Bakkum is a developer with MongoDB expertise. Shaun Verch has worked on the core server team at MongoDB. A Genentech engineer, Doug Garrett is one of the winners of the MongoDB Innovation Award for Analytics. A software architect, Tim Hawkins has led search engineering at Yahoo Europe. Technical Contributor: Wouter Thielen. Technical Editor: Mihalis Tsoukalos. Table of Contents PART 1 GETTING STARTED A database for the modern web MongoDB through the JavaScript shell Writing programs using MongoDB PART 2 APPLICATION DEVELOPMENT IN MONGODB Document-oriented data Constructing queries Aggregation Updates, atomic operations, and deletes PART 3 MONGODB MASTERY Indexing and query optimization Text search WiredTiger and pluggable storage Replication Scaling your system with sharding Deployment and administration

**Internet of Things with Arduino Cookbook** Marco Schwartz 2016-09-30 Over 60 recipes will help you build smart IoT solutions and surprise yourself with captivating IoT

projects you thought only existed in Bond movies About This Book This book offers key solutions and advice to address the hiccups faced when working on Arduino-based IoT projects in the real world Take your existing skills and capabilities to the next level by building challenging IoT applications with ease. Be the tech disruptor you always wanted to be with key recipes that help you solve Arduino IoT related problems smarter and faster. Put IoT to work through recipes on building Arduino-based devices that take control of your home, health, and life! Who This Book Is For This book is primarily for tech enthusiasts and early IoT adopters who would like to make the most of IoT and address the challenges encountered while developing IoT-based applications with Arduino. This book is also good for developers with basic electronics knowledge who need help to successfully build Arduino projects. What You Will Learn Monitor several Arduino boards simultaneously Tweet sensor data directly from your Arduino board Post updates on your Facebook wall directly from your Arduino board Create an automated access control with a fingerprint sensor Control your entire home from a single dashboard Make a GPS tracker that you can track in Google Maps Build a live camera that streams directly from your robot In Detail Arduino is a powerful and very versatile platform used by millions of people around the world to create DIY electronics projects. It can be connected to a wide variety of sensors and other components, making it the ideal platform to build amazing Internet of Things (IoT) projects on—the next wave in the era of computing. This book takes a recipe-based approach, giving you precise examples on how to build IoT projects of all types using the Arduino platform. You will come across projects from several fields, including the popular robotics and home automation domains. Along with being introduced to several forms of interactions within IoT, including projects that directly interact with well-known web services such as Twitter, Facebook, and Dropbox we will also focus on Machine-to-Machine (M2M) interactions, where Arduino projects interact without any human intervention. You will learn to build a few quick and easy-to-make fun projects that will really expand your horizons in the world of IoT and Arduino. Each chapter ends with a troubleshooting recipe that will help you overcome any problems faced while building these projects. By the end of this book, you will not only know how to build these projects, but also have the skills necessary to build your own IoT projects in the future. Style and approach This book takes a recipe-based approach, giving you precise examples on how to build IoT projects using the Arduino platform. You will learn to build fun and easy projects through a task-oriented approach.

**Cine-scapes** Richard Koeck 2013 Cine-scapes explores the relationship between urban space, architecture and the moving image. While an impressive amount of research has been done with regards to the way in which architecture is portrayed in film, this book offers a new perspective.... What happens if we begin to see the city as a place for an embodied visual consumption; a visual apparatus or, perhaps, a system that is based on movement, light and the body, and which we can explore in kinematic, kinetic, and kinaesthetic ways? Using film as a lens through which we look at urban spaces and places, Richard Koeck reveals the filmic and cinematic phenomena and spatial qualities that are present in postmodern landscapes, and which are perhaps otherwise disregarded or merely passively consumed. Drawing on the author's extensive knowledge derived from architectural and film practice, Cine-scapes: offers insight into architecture and urban debates through the eyes of a practitioner working in the fields of film and architectural design emphasizes how filmic/cinematic tendencies take place or find their way into urban practices can be used as a tool for educators, students and practitioners in

architecture and urban design to communicate and discuss design issues with regard to contemporary architecture and cities Cine-scapes ignites new ways of seeing, thinking and debating the nature of architecture and urban spaces.

**Nature and Nurture in Early Child Development** Daniel P. Keating 2010-12-31 For developmental scientists, the nature versus nurture debate has been settled for some time. Neither nature nor nurture alone provides the answer. It is nature and nurture in concert that shape developmental pathways and outcomes, from health to behavior to competence. This insight has moved far beyond the assertion that both nature and nurture matter, progressing into the fascinating terrain of how they interact over the course of development. In this volume, students, practitioners, policy analysts, and others with a serious interest in human development will learn what is transpiring in this new paradigm from the developmental scientists working at the cutting edge, from neural mechanisms to population studies, and from basic laboratory science to clinical and community interventions. Early childhood development is the critical focus of this volume, because many of the important nature-nurture interactions occur then, with significant influences on lifelong developmental trajectories.

**Programming and Customizing the Multicore Propeller Microcontroller: The Official Guide** Parallax 2010-02-05 The Only Official Guide to the Parallax Multicore Propeller Microcontroller Written by a team of Propeller experts, this authoritative guide shows you how to realize your design concepts by taking full advantage of the multicore Propeller microcontroller's unique architecture. The book begins with a review of the Propeller hardware, software, and Spin language so you can get started right away. Programming and Customizing the Multicore Propeller Microcontroller: The Official Guide is filled with a wide variety of step-by-step, hands-on projects. Put your ideas into production when you learn how to: Debug code for multiple cores Understand how the Propeller interacts with different sensors Wirelessly network Propeller chips Build a balancing robot and control it with computer vision Develop networking applications using an off-the-shelf Ethernet chip Create a portable multivariable GPS tracking and data logging device Use the Propeller as a remote virtual peripheral for media applications Create a Propeller-powered HVAC green house model Synthesize speech with the Propeller Experience more of the process at [mhprofessional.com/propeller](http://mhprofessional.com/propeller)

**An Integrated Approach to Software Engineering** Pankaj Jalote 2013-06-29 It is clear that the development of large software systems is an extremely complex activity, which is full of various opportunities to introduce errors. Software engineering is the discipline that provides methods to handle this complexity and enables us to produce reliable software systems with maximum productivity. An Integrated Approach to Software Engineering is different from other approaches because the various topics are not covered in isolation. A running case study is employed throughout the book, illustrating the different activity of software development on a single project. This work is important and instructive because it not only teaches the principles of software engineering, but also applies them to a software development project such that all aspects of development can be clearly seen on a project.

**Mastering Parallel Programming with R** Simon R. Chapple 2016-05-31 Master the robust features of R parallel programming to accelerate your data science computations About This Book Create R programs that exploit the computational capability of your cloud platforms and computers to the fullest Become an expert in writing the most efficient and highest performance parallel algorithms in R Get to grips with the concept of parallelism to accelerate your existing R programs

**Who This Book Is For** This book is for R programmers who want to step beyond its inherent single-threaded and restricted memory limitations and learn how to implement highly accelerated and scalable algorithms that are a necessity for the performant processing of Big Data. No previous knowledge of parallelism is required. This book also provides for the more advanced technical programmer seeking to go beyond high level parallel frameworks. What You Will Learn Create and structure efficient load-balanced parallel computation in R, using R's built-in parallel package Deploy and utilize cloud-based parallel infrastructure from R, including launching a distributed computation on Hadoop running on Amazon Web Services (AWS) Get accustomed to parallel efficiency, and apply simple techniques to benchmark, measure speed and target improvement in your own code Develop complex parallel processing algorithms with the standard Message Passing Interface (MPI) using RMPI, pbdMPI, and SPRINT packages Build and extend a parallel R package (SPRINT) with your own MPI-based routines Implement accelerated numerical functions in R utilizing the vector processing capability of your Graphics Processing Unit (GPU) with OpenCL Understand parallel programming pitfalls, such as deadlock and numerical instability, and the approaches to handle and avoid them Build a task farm master-worker, spatial grid, and hybrid parallel R programs In Detail R is one of the most popular programming languages used in data science. Applying R to big data and complex analytic tasks requires the harnessing of scalable compute resources. Mastering Parallel Programming with R presents a comprehensive and practical treatise on how to build highly scalable and efficient algorithms in R. It will teach you a variety of parallelization techniques, from simple use of R's built-in parallel package versions of `lapply()`, to high-level AWS cloud-based Hadoop and Apache Spark frameworks. It will also teach you low level scalable parallel programming using RMPI and pbdMPI for message passing, applicable to clusters and supercomputers, and how to exploit thousand-fold simple processor GPUs through ROpenCL. By the end of the book, you will understand the factors that influence parallel efficiency, including assessing code performance and implementing load balancing; pitfalls to avoid, including deadlock and numerical instability issues; how to structure your code and data for the most appropriate type of parallelism for your problem domain; and how to extract the maximum performance from your R code running on a variety of computer systems. Style and approach This book leads you chapter by chapter from the easy to more complex forms of parallelism. The author's insights are presented through clear practical examples applied to a range of different problems, with comprehensive reference information for each of the R packages employed. The book can be read from start to finish, or by dipping in chapter by chapter, as each chapter describes a specific parallel approach and technology, so can be read as a standalone.

**The Care of Wounds** Carol Dealey 2012-03-19 The Care of Wounds addresses all aspects of holistic wound management. The fourth edition of this successful clinical text continues to reflect current research and evidence-based practice, while incorporating the considerable developments which have occurred in wound care practice since the previous edition. It includes chapters on the physiology of wound healing, general principles of wound management, wound management products, and the management of patients with both acute and chronic wounds. The title is an essential read for all nurses and healthcare professionals working in the field of tissue viability and wound healing. Comprehensive and clinically-oriented Examines best practice in wound management Incorporates national and international clinical guidelines where applicable Superbly illustrated with full

colour throughout

**The PIC Microcontroller: Your Personal Introductory Course** John Morton 2005-09-23  
John Morton offers a uniquely concise and practical guide to getting up and running with the PIC Microcontroller. The PIC is one of the most popular of the microcontrollers that are transforming electronic project work and product design, and this book is the ideal introduction for students, teachers, technicians and electronics enthusiasts. Assuming no prior knowledge of microcontrollers and introducing the PIC Microcontroller's capabilities through simple projects, this book is ideal for electronics hobbyists, students, school pupils and technicians. The step-by-step explanations and the useful projects make it ideal for student and pupil self-study: this is not just a reference book - you start work with the PIC microcontroller straight away. The revised third edition focuses entirely on the re-programmable flash PIC microcontrollers such as the PIC16F54, PIC16F84 and the extraordinary 8-pin PIC12F508 and PIC12F675 devices. \* Demystifies the leading microcontroller for students, engineers and hobbyists \* Emphasis on putting the PIC to work, not theoretical microelectronics \* Simple programs and circuits introduce key features and commands through project work

**Integration of Alternative Sources of Energy** Felix A. Farret 2006-01-17 A unique electrical engineering approach to alternative sources of energy Unlike other books that deal with alternative sources of energy from a mechanical point of view, *Integration of Alternative Sources of Energy* takes an electrical engineering perspective. Moreover, the authors examine the full spectrum of alternative and renewable energy with the goal of developing viable methods of integrating energy sources and storage efficiently. Readers become thoroughly conversant with the principles, possibilities, and limits of alternative and renewable energy. The book begins with a general introduction and then reviews principles of thermodynamics. Next, the authors explore both common and up-and-coming alternative energy sources, including hydro, wind, solar, photovoltaic, thermosolar, fuel cells, and biomass. Following that are discussions of microturbines and induction generators, as well as a special chapter dedicated to energy storage systems. After setting forth the fundamentals, the authors focus on how to integrate the various energy sources for electrical power production. Discussions related to system operation, maintenance, and management, as well as standards for interconnection, are also set forth. Throughout the book, diagrams are provided to demonstrate the electrical operation of all the systems that are presented. In addition, extensive use of examples helps readers better grasp how integration of alternative energy sources can be accomplished. The final chapter gives readers the opportunity

to learn about the HOMER Micropower Optimization Model. This computer model, developed by the National Renewable Energy Laboratory (NREL), assists in the design of micropower systems and facilitates comparisons of power generation techniques. Readers can download the software from the NREL Web site. This book is a must-read for engineers, consultants, regulators, and environmentalists involved in energy production and delivery, helping them evaluate alternative energy sources and integrate them into an efficient energy delivery system. It is also a superior textbook for upper-level undergraduates and graduate students.

**Big Farms Make Big Flu** Rob Wallace 2016-06-30 Thanks to breakthroughs in production and food science, agribusiness has been able to devise new ways to grow more food and get it more places more quickly. There is no shortage of news items on hundreds of thousands of hybrid poultry – each animal genetically identical to the next – packed together in megabarns, grown out in a matter of months, then slaughtered, processed and shipped to the other side of the globe. Less well known are the deadly pathogens mutating in, and emerging out of, these specialized agro-environments. In fact, many of the most dangerous new diseases in humans can be traced back to such food systems, among them *Campylobacter*, Nipah virus, Q fever, hepatitis E, and a variety of novel influenza variants. Agribusiness has known for decades that packing thousands of birds or livestock together results in a monoculture that selects for such disease. But market economics doesn't punish the companies for growing Big Flu – it punishes animals, the environment, consumers, and contract farmers. Alongside growing profits, diseases are permitted to emerge, evolve, and spread with little check. "That is," writes evolutionary biologist Rob Wallace, "it pays to produce a pathogen that could kill a billion people." In *Big Farms Make Big Flu*, a collection of dispatches by turns harrowing and thought-provoking, Wallace tracks the ways influenza and other pathogens emerge from an agriculture controlled by multinational corporations. Wallace details, with a precise and radical wit, the latest in the science of agricultural epidemiology, while at the same time juxtaposing ghastly phenomena such as attempts at producing featherless chickens, microbial time travel, and neoliberal Ebola. Wallace also offers sensible alternatives to lethal agribusiness. Some, such as farming cooperatives, integrated pathogen management, and mixed crop-livestock systems, are already in practice off the agribusiness grid. While many books cover facets of food or outbreaks, Wallace's collection appears the first to explore infectious disease, agriculture, economics and the nature of science together. *Big Farms Make Big Flu* integrates the political economies of disease and science to derive a new understanding of the evolution of infections. Highly capitalized agriculture may be farming pathogens as much as chickens or corn.