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The Microsoft Technology Associate certification (MTA) curriculum helps instructors teach and validate fundamental technology concepts with a foundation for students' careers as well as the confidence they need to succeed in advanced studies. Through the use of MOAC MTA titles you can help ensure your students future success in and out of the classroom. This MTA text covers the following Windows Operating System vital fundamental skills: • Understanding Operating System Configurations • Installing and Upgrading Client Systems • Managing Applications, Managing Files and Folders • Managing Devices • Understanding Operating System Maintenance. Click here to learn more about Microsoft Technology Associate, (MTA) a new and innovative certification track designed to provide a pathway for future success in technology courses and careers.

The development of new materials is recognized as one of the major elements in the overall technological evolution that must go on in order to sustain and even improve the quality of life for citizens of all nations. There are many components to this development, but one is to achieve a better understanding of the properties of materials using the most sophisticated scientific tools that are available. As condensed matter physicists and materials scientists work toward this goal, they find that it is useful to divide their efforts and focus on specific areas, because certain analytical and theoretical techniques will be more useful for the study of one class of materials than another. One such area is the study of metals and metallic alloys, which are used in the manufacture of products as diverse as automobiles and space stations. Progress in this area has been very rapid in recent years, and the new developments come from many different countries. For these reasons the Advanced Research Workshop Programme in the NATO Scientific Affairs Division has seen fit to sponsor several meetings to bring together the researchers and students working in this field from the NATO countries and elsewhere. There have been a series of NATO-ASI's that have dealt with the results of research on the electronic structure of materials and the properties of metals, alloys, and interfaces. They are: "Electrons in finite and infinite structures" P. Phariseau and L.

This book is the first systematic exposition on the emerging domain of wireless power transfer in ad hoc communication networks. It selectively spans a coherent, large spectrum of fundamental aspects of wireless power transfer, such as mobility management in the network, combined wireless power and information transfer, energy flow among network devices, joint activities with wireless power transfer (routing, data gathering and solar energy harvesting), and safety provisioning through electromagnetic radiation control, as well as fundamental and novel circuits and technologies enabling the wide application of wireless powering. Comprising a total of 27 chapters, contributed by leading experts, the content is organized into six thematic sections: technologies, communication, mobility, energy flow, joint operations, and electromagnetic radiation awareness. It will be valuable for researchers, engineers, educators, and students, and it may also be used as a supplement to academic courses on algorithmic applications, wireless protocols, distributed computing, and networking.

The NAB Engineering Handbook is the definitive resource for broadcast engineers. It provides in-depth information about each aspect of the broadcast chain from audio and video contribution through an entire broadcast facility all the way to the antenna. New topics include Ultra High Definition Television, Internet Radio Interfacing and Streaming, ATSC 3.0, Digital Audio Compression Techniques, Digital Television Audio Loudness Management, and Video Format and Standards Conversion. Important updates have been made to incumbent topics such as AM, Shortwave, FM and Television Transmitting Systems, Studio Lighting, Cameras, and Principles of Acoustics. The big-picture, comprehensive nature of the NAB Engineering Handbook will appeal to all broadcast engineers—everyone from broadcast chief engineers, who need expanded knowledge of all the specialized areas they encounter in the field, to technologists in specialized fields like IT and RF who are interested in learning about unfamiliar topics. Chapters are written to be accessible and easy to understand by all levels of engineers and technicians. A wide range of related topics that engineers and technical managers need to understand are covered, including broadcast documentation, FCC practices, technical standards, security, safety, disaster planning, facility planning, project management, and engineering management.

The Red Team Field Manual (RTFM) is a no fluff, but thorough reference guide for serious Red Team members who routinely find themselves on a mission without Google or the time to scan through a man page. The RTFM contains the basic syntax for commonly used Linux and Windows command line tools, but it also encapsulates unique use cases for powerful tools such as Python and Windows PowerShell. The RTFM will repeatedly save you time looking up the hard to remember Windows nuances such as Windows wmic and dsquery command line tools, key registry values, scheduled tasks syntax, startup locations and Windows scripting. More importantly, it should teach you some new red team techniques.

With modern communication networks continuing to grow in traffic, size, complexity, and variety, control systems are critical to ensure quality and effectively manage network traffic. Providing a thorough and authoritative introduction, *Wireless Ad hoc and Sensor Networks: Protocols, Performance, and Control* examines the theory, architectures, and technologies needed to implement quality of service (QoS) in a wide variety of communication networks. Based on years of research and practical experience, this book examines the technical concepts underlying the design, implementation, research, and invention of both wired and wireless networks. The author builds a strong understanding of general concepts and common principles while also exploring issues that are specific to wired, cellular, wireless ad hoc, and sensor networks. Beginning with an overview of networks and QoS control, he systematically explores timely areas such as Lyapunov analysis, congestion control of high-speed networks, admission control based on hybrid system theory, distributed power control of various network types, link state routing using QoS parameters, and predictive congestion control. The book also provides a framework for implementing QoS control using mote hardware. Providing a deeply detailed yet conveniently practical guide to QoS implementation, *Wireless Ad hoc and Sensor Networks: Protocols, Performance, and Control* is the perfect introduction for anyone new to the field as well as an ideal reference guide for seasoned network practitioners.

Twenty projects using the Raspberry Pi, a tiny and affordable computer, for beginners looking to make cool things right away. Projects are explained with full-color visuals and simple step-by-step instructions. *20 Easy Raspberry Pi Projects* is a beginner-friendly collection of electronics projects, perfectly suited for kids, parents, educators, and hobbyists looking to level up their hardware skills. After a crash course to get you set up with your Raspberry Pi, you'll learn how to build interactive projects like a digital drum set; a WiFi controlled robot; a Pong game; an intruder alarm that sends email notifications; a gas leak detector; a weather forecaster; and IoT gadgets that control electronics around the house. Along the way, you'll work with core components like LCD screens, cameras, sensors, and even learn how to set up your own server. Each project provides step-by-step instructions, full-color photos and circuit diagrams, and the complete code to bring your build to life. If you're ready to hit the ground running and make something interesting, let *20 Easy Raspberry Pi Projects* be your guide.

This book will teach the reader how to make the most of their WRT54G series hardware. These handy little inexpensive devices can be configured for a near endless amount of

networking tasks. The reader will learn about the WRT54G's hardware components, the different third-party firmware available and the differences between them, choosing the firmware that is right for you, and how to install different third-party firmware distributions. Never before has this hardware been documented in this amount of detail, which includes a wide-array of photographs and complete listing of all WRT54G models currently available, including the WRTSL54GS. Once this foundation is laid, the reader will learn how to implement functionality on the WRT54G for fun projects, penetration testing, various network tasks, wireless spectrum analysis, and more! This title features never before seen hacks using the WRT54G. For those who want to make the most out of their WRT54G you can learn how to port code and develop your own software for the OpenWRT operating system. Never before seen and documented hacks, including wireless spectrum analysis Most comprehensive source for documentation on how to take advantage of advanced features on the inexpensive wrt54g platform Full coverage on embedded device development using the WRT54G and OpenWRT

There's a common belief that cyberspace cannot be regulated-that it is, in its very essence, immune from the government's (or anyone else's) control. Code argues that this belief is wrong. It is not in the nature of cyberspace to be unregulable; cyberspace has no "nature." It only has code-the software and hardware that make cyberspace what it is. That code can create a place of freedom-as the original architecture of the Net did-or a place of exquisitely oppressive control. If we miss this point, then we will miss how cyberspace is changing. Under the influence of commerce, cyberspace is becoming a highly regulable space, where our behavior is much more tightly controlled than in real space. But that's not inevitable either. We can-we must-choose what kind of cyberspace we want and what freedoms we will guarantee. These choices are all about architecture: about what kind of code will govern cyberspace, and who will control it. In this realm, code is the most significant form of law, and it is up to lawyers, policymakers, and especially citizens to decide what values that code embodies.

Conteúdo do Ebook Capítulo 1 (Controle de proximidade baseado em BLE usando ESP32 - Detectar presença de dispositivos BLE) Capítulo 2 (Construa seu próprio sensor de toque capacitivo para controlar eletrodomésticos usando ESP32) Capítulo 3 (Reprodutor de áudio baseado em ESP32) Capítulo 4 (Sistema de travamento de porta com reconhecimento facial ESP32-CAM) Capítulo 5 (Vários modos de espera ESP32 e como colocar o ESP32 em modo de espera profunda) Capítulo 6 (Transferência de dados em tempo real entre dois ESP32 usando Web-Socket Client no Arduino IDE) Capítulo 7 (Interface de exibição OLED com ESP32 usando Arduino IDE)

In 2009, a bipartisan Knight Commission found that while the broadband age is enabling an info. and commun. renaissance, local communities in particular are being unevenly served with critical info. about local issues. Soon after the Knight Commission delivered its findings, the FCC initiated a working group to identify crosscurrent and trend, and make recommendations on how the info. needs of communities can be met in a broadband world. This report by the FCC Working Group on the Info. Needs of Communities addresses the rapidly changing media landscape in a broadband age. Contents: Media Landscape; The Policy and Regulatory Landscape; Recommendations. Charts and tables. This is a print on demand report.

In search of answers and action, the award-winning poet and essayist Lisa Wells brings us *Believers*, introducing trailblazers and outliers from across the globe who have found radically new ways to live and reconnect to the Earth in the face of climate change. We find ourselves at the end of the world. How, then, shall we live? Like most of us, Lisa Wells has spent years overwhelmed by increasingly urgent news of climate change on an apocalyptic scale. She did not need to be convinced of the stakes, but she could not find practical answers. She embarked on a pilgrimage, seeking wisdom and paths to action from outliers and visionaries, pragmatists and iconoclasts. *Believers* tracks through the lives of these people who are dedicated to repairing the earth and seemingly undaunted by the task ahead. Wells meets an itinerant gardener and misanthrope leading a group of nomadic activists in rewilding the American desert. She finds a group of environmentalist Christians practicing “watershed discipleship” in New Mexico and another group in Philadelphia turning the tools of violence into tools of farming—guns into ploughshares. She watches the world’s greatest tracker teach others how to read a trail, and visits botanists who are restoring land overrun by invasive species and destructive humans. She talks with survivors of catastrophic wildfires in California as they try to rebuild in ways that acknowledge the fires will come again. Through empathic, critical portraits, Wells shows that these trailblazers are not so far beyond the rest of us. They have had the same realization, have accepted that we are living through a global catastrophe, but are trying to answer the next question: How do you make a life at the end of the world? Through this miraculous commingling of acceptance and activism, this focus on seeing clearly and moving forward, Wells is able to take the devastating news facing us all, every day, and inject a possibility of real hope. *Believers* demands transformation. It will change how you think about your own actions, about how you can still make an impact, and about how we might yet reckon with our inheritance.

“I am known as ‘One Shot,’ because I have just one shot to save any kids who may be going through what I go through every day . . .” Born with a deforming disease known as CLOVES syndrome, Alex Bruorton has learned to deflect the hurtful comments slung his way and focus on the beautiful, brave person he truly is. From birth, his illness, which causes severe overgrowth in his face, was painfully evident. He has endured twenty-five surgeries to correct the growths, but nothing lasts for long. At a very young age, he realized he had to accept his face as it is. Fortunately, his family’s fierce love and protection have been constant and impenetrable. But it’s almost impossible to totally shield a child from bullying. Alex went to school, suffered horrible attacks, and returned home, hiding his fear and anger. Gradually, his family found a way to help him help himself. They enlisted the help of a therapist who showed Alex how to declare a truce on his war with the outside world and learn to open up and talk—about himself, about life, about pain, and about joy. Today, Alex has friends, is an avid fisherman, and loves his life. Any bullies who come his way are quickly disarmed by his honest, integrity, and humanity. His story will inspire kids and parents alike. Zuiker Press is proud to publish stories about important current

topics for kids and adolescents, written by their peers, that will help them cope with the challenges they face in today's troubled world.

Arduino Compatible ESP32 (ProtoTyping) Arduino Lenonard ATmega32u4 ESP8266 WiFi Module 20 Arduino Yun Arduino + Wifi Shield Maker

Take a practioner's approach in analyzing the Internet of Things (IoT) devices and the security issues facing an IoT architecture. You'll review the architecture's central components, from hardware communication interfaces, such as UART and SPI, to radio protocols, such as BLE or ZigBee. You'll also learn to assess a device physically by opening it, looking at the PCB, and identifying the chipsets and interfaces. You'll then use that information to gain entry to the device or to perform other actions, such as dumping encryption keys and firmware. As the IoT rises to one of the most popular tech trends, manufactures need to take necessary steps to secure devices and protect them from attackers. The IoT Hacker's Handbook breaks down the Internet of Things, exploits it, and reveals how these devices can be built securely. What You'll Learn Perform a threat model of a real-world IoT device and locate all possible attacker entry points Use reverse engineering of firmware binaries to identify security issues Analyze, assess, and identify security issues in exploited ARM and MIPS based binaries Sniff, capture, and exploit radio communication protocols, such as Bluetooth Low Energy (BLE), and ZigBee Who This Book is For Those interested in learning about IoT security, such as pentesters working in different domains, embedded device developers, or IT people wanting to move to an Internet of Things security role.

FCC Record A Comprehensive Compilation of Decisions, Reports, Public Notices, and Other Documents of the Federal Communications Commission of the United States Information Needs of Communities The Changing Media Landscape in a Broadband Age DIANE Publishing

The No-Nonsense, Technician Class License Study Guide will help you get your first amateur radio license as quickly as possible. It not only gives you the answers to questions on the test, but also clearly and succinctly explains the concepts.

Chemisorption and Reactions on Metallic Films, Volume 1 is a six-chapter text that describes the role of evaporated metal films in advancing the understanding of the metal-gas interface chemistry. Chapter 1 presents electron microscopy and diffraction studies and their contributions in elucidating the growth and structure of polycrystalline and epitaxially grown films. Chapter 2 describes the techniques of preparation and characterization of metallic films and examines the heats of adsorption, electrical conductivity, surface area, and sticking probabilities of such films. Chapter 3 discusses the strength of pairwise interactions; the influence of the intermetallic bond on the equilibrium shape of metal crystallites; the bonding of individual metal atoms to different crystallographic planes; the interaction of metal atoms and crystallites with non-conducting substrates; and the effects of residual gases on this interaction. Chapters 4 and 5 address the adsorption of metallic films, with an emphasis on general trends in adsorptive and electronic properties of bulk metals. These chapters also discuss the effects of adsorption on the electrical conductance of island-like and coherent films and on the ferromagnetic properties of films. Chapter 6 evaluates the application of infrared spectroscopy to the studies of the surfaces of metal films and the use of the available infrared spectroscopic data in reconciling the results of adsorption studies on oxide-supported metal particles with those obtained with clean evaporated metal films prepared under ultra high vacuum conditions. Research scientists and graduate students who are interested in the fundamentals of adsorption and catalysis will find this volume invaluable.

Materials physics is a very active research field at present and it is expected to remain so in the foreseeable future. Different spectroscopies are currently used to investigate the structure and dynamics of crystalline materials. Some traditional spectroscopies are presented in this book: optical, magnetic resonance, ultrasonic, brillouin, neutron scattering, soft mode and dielectric response spectroscopies. For all of them, the presentation is complemented with some reference material for more modern or sophisticated spectroscopies. This book should be useful as an introductory textbook for a short course on solid state spectroscopies. A number of exercises are worked out throughout the text. Ferro- and piezoelectric materials and their phase transitions are paid special attention.

Económico y versátil, Raspberry Pi puede adaptarse a miles de desarrollos. Este libro le permite explorar todas sus posibilidades mediante la aplicación de principios de ingeniería junto con las técnicas de programación en Linux, y desarrollar las habilidades que necesita para diseñar y construir un sinfín de proyectos. Raspberry Pi a fondo para desarrolladores cubre los conceptos básicos y avanzados de la plataforma de hardware, accesorios recomendados, software, sistemas Linux integrados y técnicas de programación en Linux. También profundiza en la interfaz, el control y de comunicaciones, con información detallada sobre Raspberry Pi GPIOs, buses, dispositivos UART y periféricos USB. Aprenderá a configurar un entorno de compilación cruzada para construir aplicaciones de software a gran escala, así como la forma de combinar hardware y software para permitir que el Raspberry Pi interactúe eficazmente con su entorno físico. Por último, descubrirá cómo utilizar el Raspberry Pi para aplicaciones avanzadas de interfaz e interacción como Internet de las Cosas (IoT, por sus siglas en inglés); comunicación y control inalámbricos; interfaces de usuario; imágenes, vídeos y audios; llegando hasta la programación del kernel de Linux. En lugar de instrucciones para algunos proyectos específicos, Raspberry Pi a fondo para desarrolladores le ofrece las habilidades necesarias para construir los proyectos que existen en su imaginación. Aprenderá a: Desarrollar habilidades esenciales de Linux y de programación Construir aplicaciones de Internet de las Cosas (IoT) Dominar la interfaz, control y comunicación Diseñar aplicaciones que interactúen con el entorno físico Utilizar la plataforma Arduino como un procesador de servicios Construir aplicaciones de comunicación inalámbrica Escribir e instalar módulos del kernel de Linux personalizados Usar Raspberry Pi 3 y Raspberry Pi Zero en sus proyectos

From Google's chief economist, Varian's best-selling intermediate microeconomics texts are revered as some of the best in the field. And now students can work problems online with Smartwork5, Norton's online homework system, packaged at no additional charge with the Media Update Editions. In addition to online homework, the texts now include four-color graphs and new interactive animations.

The first IUPAC Manual of Symbols and Terminology for Physicochemical Quantities and Units (the Green Book) of which this is the direct successor, was published in 1969, with the object of 'securing clarity and precision, and wider agreement in the use of symbols, by chemists in different countries, among physicists, chemists and engineers, and by editors of scientific journals'. Subsequent revisions have taken account of many developments in the field, culminating in the major extension and revision represented by the 1988 edition under the simplified title Quantities, Units and Symbols in Physical Chemistry. This 2007, Third Edition, is a further revision of the material which reflects the experience of the contributors with the previous editions. The book has been systematically brought up to date and new sections have been added. It strives to improve the exchange of scientific information among the readers in different disciplines and across different nations. In a rapidly expanding volume of scientific literature where each discipline has a tendency to retreat into its own jargon this book attempts to provide a readable compilation of widely used terms and symbols from many sources together with brief understandable definitions. This is the definitive guide for scientists and organizations working across a multitude of disciplines requiring internationally approved nomenclature.

War is Not Healthy for Children and Other Living Things.

Based on the popular Artech House classic, Digital Communication Systems Engineering with Software-Defined Radio, this book provides a practical approach to quickly learning the software-defined radio (SDR) concepts needed for work in the field. This up-to-date volume guides readers on how to quickly prototype wireless designs using SDR for real-world testing and experimentation. This book explores advanced wireless communication techniques such as OFDM, LTE, WLA, and hardware targeting. Readers will gain an understanding of the core concepts behind wireless hardware, such as the radio frequency front-end, analog-to-digital and digital-to-analog converters, as well as various processing technologies. Moreover, this volume includes chapters on timing estimation, matched filtering, frame synchronization message decoding, and source coding. The orthogonal frequency division multiplexing is explained and details about HDL code generation and deployment are provided. The book concludes with coverage of the WLAN toolbox with OFDM beacon reception and the LTE toolbox with downlink reception. Multiple case studies are provided throughout the book. Both MATLAB and Simulink source code are included to assist readers with their projects in the field.

Modern day cellular mobile networks use Massive MIMO technology to extend range and service multiple devices within a cell. This has brought tremendous improvements in the high peak data rates that can be handled. Nevertheless, one of the characteristics of this technology is large variations in the quality of service dependent on where the end user is located in any given cell. This becomes increasingly problematic when we are creating a society where wireless access is supposed to be ubiquitous. When payments, navigation, entertainment, and control of autonomous vehicles are all relying on wireless connectivity the primary goal for future mobile networks should not be to increase the peak rates, but the rates that can be guaranteed to the vast majority of the locations in the geographical coverage area. The cellular network architecture was not designed for high-rate data services but for low-rate voice services, thus it is time to look beyond the cellular paradigm and make a clean-slate network design that can reach the performance requirements of the future. This monograph considers the cell-free network architecture that is designed to reach the aforementioned goal of uniformly high data rates everywhere. The authors introduce the concept of a cell-free network before laying out the foundations of what is required to design and build such a network. They cover the foundations of channel estimation, signal processing, pilot assignment, dynamic cooperation cluster formation, power optimization, fronthaul signaling, and spectral efficiency evaluation in uplink and downlink under different degrees of cooperation among the access points and arbitrary linear combining and precoding. This monograph provides the reader with all the fundamental information required to design and build the next generation mobile networks without being hindered by the inherent restrictions of modern cellular-based technology.

This book brings a broad review of recent global developments in theory, instrumentation, and practical applications of electron microscopy. It was created by 13 contributions from experts in different fields of electron microscopy and technology from over 20 research institutes worldwide.

A revolutionary memoir about domestic abuse by the award-winning author of *Her Body and Other Parties* In the Dream House is Carmen Maria Machado's engrossing and wildly innovative account of a relationship gone bad, and a bold dissection of the mechanisms and cultural representations of psychological abuse. Tracing the full arc of a harrowing relationship with a charismatic but volatile woman, Machado struggles to make sense of how what happened to her shaped the person she was becoming. And it's that struggle that gives the book its original structure: each chapter is driven by its own narrative trope—the haunted house, erotica, the bildungsroman—through which Machado holds the events up to the light and examines them from different angles. She looks back at her religious adolescence, unpacks the stereotype of lesbian relationships as safe and utopian, and widens the view with essayistic explorations of the history and reality of abuse in queer relationships. Machado's dire narrative is leavened with her characteristic wit, playfulness, and openness to inquiry. She casts a critical eye over legal proceedings, fairy tales, *Star Trek*, and Disney villains, as well as iconic works of film and fiction. The result is a wrenching, riveting book that explodes our ideas about what a memoir can do and be.

Industries which use pumps, seals and pipes will almost certainly also use valves in their systems. Someone in each industry needs to be able to design, purchase or maintain the right valve for the job in hand, and that can amount to a lot of valves world-wide. Here is a single resource which is aimed at those designers and end users, plus their engineering staff. Brian Nesbitt is a well-known consultant with a considerable publishing record. A lifetime of experience backs up the huge amount of practical detail found in this volume. Its international approach is no accident: it will have world-wide take-up. *Ideal reference for industry *Practical approach compared with competition *Buyers' guide included

This best-selling text is still the most modern presentation of the subject. The Varian approach gives students tools they can use on exams, in the rest of their classes, and in their

careers after graduation.

Enrich your skill set with Open SQL and CD5 views DESCRIPTION The book has been written in such a way that the concepts are explained in detail, giving adequate emphasis on examples. To provide clarity on the programming examples, logic is properly explained and discussed by using comments in program itself. The topics covered in this book include starting the software using snapshots of the same and writing programs. Simple to complex SAP/ ABAP HANA examples are provided in detail, considering the requirement of IT consultants the basic idea of developing projects in it. The examples provided in this book are user-focused and are provided through sections, figures and examples. KEY FEATURES Comprehensive coverage of SAP / ABAP HANA with emphasis on real-time case studies. Practical examples along with Screen personas, SAP Fiori cloud, OPEN SQL, Native SQL & ADBC, CDS support in SAP NW ABAP 7.4 SP5, SAP HANA Studio, performance enabler Rules & guidelines. Simple language, crystal clear approach, straight forward comprehensible presentation. Concepts are duly supported with examples. Topic coverage with the aim to fill the skill gap among industry and academia. SAP Business Suite powered by SAP HANA are helpful for developing projects for IT consultants WHAT WILL YOU LEARN Gaining Customers by adopting and implementing SAP HANA in organisations / projects / programs Facilitating to maintain Customer Relationships as the core of all successful working relationships are two essential characteristics: trust and commitment. To demonstrate their trustworthiness and commitment to customers, progressive suppliers periodically provide evidence to customers of their accomplishments. Help in delivering “Superior Value and Getting an Equitable Return” as understanding value in business markets and doing business based on value delivered gives suppliers the means to get an equitable return for their efforts. This document is a compilation of SAP ABAP/4 coding and efficiency standards and will provide guidance in creating readable, maintainable code. It is intended for all developers in the SAP R/3 system. This document is based primarily on ABAP/4. WHO THIS BOOK IS FOR Person from IT domain having software background, preferably with SAP technical or techno functional or functional or domain knowledge. Table of Contents 1. Introduction 2. General Programming Standards 3. ABAP Internal Names 4. ABAP/4 Dictionary 5. Security Authorisations considerations 6. ABAP/4 Coding Techniques

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