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High-speed Digital Design - Howard W. Johnson 1993-01-01

Focused on the field of knowledge lying between digital and analog circuit theory, this new text will help engineers working with digital systems shorten their product development cycles and help fix their latest design problems. The scope of the material covered includes signal reflection, crosstalk, and noise problems which occur in high speed digital machines (above 10 megahertz). This volume will be of practical use to digital logic designers, staff and senior communications scientists, and all those interested in digital design.

Microwave Journal - 2009

Intelligent Systems - Siba K. Udgata 2021-04-19

This book features best selected research papers presented at the International Conference on Machine Learning, Internet of Things and Big Data (ICMIB 2020) held at Indira Gandhi Institute of Technology, Sarang, India, during September 2020. It comprises high-quality research work by academicians and industrial experts in the field of machine learning, mobile computing, natural language processing, fuzzy computing, green computing, human-computer interaction, information retrieval, intelligent control, data mining and knowledge discovery, evolutionary computing, IoT and applications in smart environments, smart health, smart city, wireless networks, big data, cloud computing, business intelligence, internet security, pattern recognition, predictive analytics applications in healthcare, sensor networks and social sensing and statistical analysis of search techniques.

Microwave and Wireless Synthesizers - Ulrich L. Rohde 2021-04-27

The new edition of the leading resource on designing digital frequency synthesizers from microwave and wireless applications, fully updated to reflect the most modern integrated circuits and semiconductors Microwave and Wireless Synthesizers: Theory and Design, Second Edition, remains the standard text on the subject by providing complete and up-to-date coverage of both practical and theoretical aspects of modern frequency synthesizers and their components. Featuring contributions from leading experts in the field, this classic volume describes loop fundamentals, noise and spurious responses, special loops, loop components, multiloop synthesizers, and more. Practical synthesizer examples illustrate the design of a high-performance hybrid synthesizer and performance measurement techniques—offering readers clear instruction on the various design steps and design rules. The second edition includes extensively revised content throughout, including a modern approach to dealing with the noise and spurious response of loops and updated material on digital signal processing and architectures. Reflecting today's technology, new practical and validated examples cover a combination of analog and digital synthesizers and hybrid systems. Enhanced and expanded chapters discuss implementations of direct digital synthesis (DDS) architectures, the voltage-controlled oscillator (VCO), crystal and other high-Q based oscillators, arbitrary waveform generation, vector signal generation, and other current tools and techniques. Now requiring no additional literature to be useful, this comprehensive, one-stop resource: Provides a fully reviewed, updated, and enhanced presentation of microwave and wireless synthesizers Presents a clear mathematical method for designing oscillators for best noise performance at both RF and microwave frequencies Contains new illustrations, figures, diagrams, and examples Includes extensive appendices to aid in calculating phase noise in free-running oscillators, designing VHF and UHF oscillators with CAD software, using state-of-the-art synthesizer chips, and generating millimeter wave frequencies using the delay line principle Containing numerous designs of proven

circuits and more than 500 relevant citations from scientific journal and papers, Microwave and Wireless Synthesizers: Theory and Design, Second Edition, is a must-have reference for engineers working in the field of radio communication, and the perfect textbook for advanced electrical engineering students.

Advances in Intelligent Systems and Computing II - Natalia Shakhovska 2017-11-20

This book reports on new theories and applications in the field of intelligent systems and computing. It covers computational and artificial intelligence methods, as well as advances in computer vision, current issues in big data and cloud computing, computation linguistics, and cyber-physical systems. It also reports on data mining and knowledge extraction technologies, as well as central issues in intelligent information management. Written by active researchers, the respective chapters are based on papers presented at the International Conference on Computer Science and Information Technologies (CSIT 2017), held on September 5-8, 2017, in Lviv, Ukraine; and at two workshops accompanying the conference: one on inductive modeling, jointly organized by the Lviv Polytechnic National University and the National Academy of Science of Ukraine; and another on project management, which was jointly organized by the Lviv Polytechnic National University, the International Project Management Association, the Ukrainian Project Management Association, the Kazakhstan Project Management Association, and Nazarbayev University. Given its breadth of coverage, the book provides academics and professionals with extensive information and a timely snapshot of the field of intelligent systems, and is sure to foster new discussions and collaborations among different groups.

RF Current Source Drive and Decoupling Technique for Parallel Transmit Arrays in Magnetic Resonance Imaging - Won-Je Lee 2008

Microwave Power Amplifier Design with MMIC Modules - Howard Hausman 2018-06-30

Solid state power amplifiers (SSPA) are a critical part of many microwave systems. Designing SSPAs with monolithic microwave integrated circuits (MMIC) has boosted device performance to much higher levels focused on PA modules. This cutting-edge book offers engineers practical guidance in selecting the best power amplifier module for a particular application and interfacing the selected module with other power amplifier modules in the system. It also explains how to identify and mitigate peripheral issues concerning the PA modules, SSPAs, and microwave systems. This authoritative volume presents the critical techniques and underpinnings of SSPA design, enabling professionals to optimize device and system performance. Engineers gain the knowledge they need to evaluate the optimum topologies for the design of a chain of microwave devices, including power amplifiers. Additionally, the book addresses the interface between the microwave subsystems and the primary DC power, the control and monitoring circuits, and the thermal and EMI paths. Packed with 240 illustrations and over 430 equations, this detailed book provides the practical tools engineers need for their challenging projects in the field.

From Frequency to Time-Average-Frequency - Liming Xiu 2015-05-18

Written in a simple, easy to understand style, this book will teach PLL users how to use new clock technology in their work in order to create innovative applications. Investigates the clock frequency concept from a different perspective--at an application level Teaches engineers to use this new clocking technology to create innovations in chip/system level, through real examples extracted from commercial products

Reconfigurable Antenna Design and Analysis - Mohammad Ali 2021-05-31

This exciting new book focuses on the analysis and design of reconfigurable antennas for modern wireless

communications, sensing, and radar. It presents the definitions of basic antenna parameters, an overview of RF switches and explains how to characterize their insertion loss, isolation, and power handling issues. Basic reconfigurable antenna building blocks, such as dipoles, monopoles, patches and slots are described, followed by presentations on frequency reconfigurable antennas, pattern reconfigurable antennas, and basic scanning antenna arrays. Switch biasing in an electromagnetic environment is discussed, as well as simulation strategies of reconfigurable antennas, and MIMO (Multiple Input Multiple Output) reconfigurable antennas. Performance characterization of reconfigurable antennas is also presented. The book provides information for the technical professional to design frequency reconfigurable, pattern reconfigurable, and MIMO antennas all relevant for modern wireless communication systems. Readers learn how to select switching devices, bias them properly, and understand their role in the overall reconfigurable antenna design. The book presents practical experimental implementation issues, including losses due to switches, materials, and EMI (Electromagnetic Interference) and shows how to address those.

Ethernet: The Definitive Guide - Charles E. Spurgeon 2014-03-13

Get up to speed on the latest Ethernet capabilities for building and maintaining networks for everything from homes and offices to data centers and server machine rooms. This thoroughly revised, comprehensive guide covers a wide range of Ethernet technologies, from basic operation to network management, based on the authors' many years of field experience. When should you upgrade to higher speed Ethernet? How do you use switches to build larger networks? How do you troubleshoot the system? This book provides the answers. If you're looking to build a scalable network with Ethernet to satisfy greater bandwidth and market requirements, this book is indeed the definitive guide. Examine the most widely used media systems, as well as advanced 40 and 100 gigabit Ethernet Learn about Ethernet's four basic elements and the IEEE standards Explore full-duplex Ethernet, Power over Ethernet, and Energy Efficient Ethernet Understand structured cabling systems and the components you need to build your Ethernet system Use Ethernet switches to expand and improve network design Delve into Ethernet performance, from specific channels to the entire network Get troubleshooting techniques for problems common to twisted-pair and fiber optic systems

Reconfigurable Computing Systems Engineering - Lev Kirischian 2017-12-19

Reconfigurable Computing Systems Engineering: Virtualization of Computing Architecture describes the organization of reconfigurable computing system (RCS) architecture and discusses the pros and cons of different RCS architecture implementations. Providing a solid understanding of RCS technology and where it's most effective, this book: Details the architecture organization of RCS platforms for application-specific workloads Covers the process of the architectural synthesis of hardware components for system-on-chip (SoC) for the RCS Explores the virtualization of RCS architecture from the system and on-chip levels Presents methodologies for RCS architecture run-time integration according to mode of operation and rapid adaptation to changes of multi-parametric constraints Includes illustrative examples, case studies, homework problems, and references to important literature A solutions manual is available with qualifying course adoption. Reconfigurable Computing Systems Engineering: Virtualization of Computing Architecture offers a complete road map to the synthesis of RCS architecture, exposing hardware design engineers, system architects, and students specializing in designing FPGA-based embedded systems to novel concepts in RCS architecture organization and virtualization.

Frequency-Agile Antennas for Wireless Communications - Aldo Petosa 2013-11-01

Mobile data subscriptions are expected to more than double and mobile wireless traffic to increase by more than tenfold over the next few years. Proliferation of smart phones, tablets, and other portable devices are placing greater demands for services such as web browsing, global positioning, video streaming, and video telephony. Many of the proposed solutions to deal with these demands will have a significant impact on antenna designs. Antennas with frequency agility are considered a promising technology to help implement these new solutions. This book provides readers with a sense of the capabilities of frequency-agile antennas (FAAs), the widely diverse methods for achieving tunability, the current achievable performance, and the challenges still facing FAA designs. This resource explores the many aspects of FAAs, including an examination of the metrics used to evaluate their performance, a review of the most commonly used antenna elements, an in-depth look at the wide variety of mechanisms for achieving tunability, and a comprehensive survey of diverse examples of FAA designs. The focus is on FAAs for wireless mobile

communications with applications including handsets, laptops, wireless machine-to-machine communications, as well as larger, fixed designs such as cellular base station antennas.

ANALOG ELECTRONICS - L. K. MAHESWARI 2009-01-13

This text offers a comprehensive introduction to a wide, relevant array of topics in analog electronics. It is intended for students pursuing courses in electrical, electronics, computer, and related engineering disciplines. Beginning with a review of linear circuit theory and basic electronic devices, the text moves on to present a detailed, practical understanding of many analog integrated circuits. The most commonly used analog IC to build practical circuits is the operational amplifier or op-amp. Its characteristics, basic configurations and applications in the linear and nonlinear circuits are explained. Modern electronic systems employ signal generators, analog filters, voltage regulators, power amplifiers, high frequency amplifiers and data converters. Commencing with the theory, the design of these building blocks is thoroughly covered using integrated circuits. The development of microelectronics technology has led to a parallel growth in the field of Micro-electromechanical Systems (MEMS) and Nano-electromechanical Systems (NEMS). The IC sensors for different energy forms with their applications in MEMS components are introduced in the concluding chapter. Several computer-based simulations of electronic circuits using PSPICE are presented in each chapter. These examples together with an introduction to PSPICE in an Appendix provide a thorough coverage of this simulation tool that fully integrates with the material of each chapter. The end-of-chapter problems allow students to test their comprehension of key concepts. The answers to these problems are also given.

Microwave and RF Semiconductor Control Device Modeling - Robert H. Caverly 2016-02-01

This comprehensive new resource presents a detailed look at the modeling and simulation of microwave semiconductor control devices and circuits. Fundamental PIN, MOSFET, and MESFET nonlinear device modeling are discussed, including the analysis of transient and harmonic behavior. Considering various control circuit topologies, the book analyzes a wide range of models, from simple approximations, to sophisticated analytical approaches. Readers find clear examples that provide guidance in how to use specific modeling techniques for their challenging projects in the field. Numerous illustrations help practitioners better understand important device and circuit behavior, revealing the relationship between key parameters and results. This authoritative volume covers basic and complex mathematical models for the most common semiconductor control elements used in today's microwave and RF circuits and systems.

Electromagnetic Compatibility - David A. Weston 2016-11-03

Revised, updated, and expanded, *Electromagnetic Compatibility: Methods, Analysis, Circuits, and Measurement, Third Edition* provides comprehensive practical coverage of the design, problem solving, and testing of electromagnetic compatibility (EMC) in electrical and electronic equipment and systems. This new edition provides novel information on theory, applications, evaluations, electromagnetic computational programs, and prediction techniques available. With sixty-nine schematics providing examples for circuit level electromagnetic interference (EMI) hardening and cost effective EMI problem solving, this book also includes 1130 illustrations and tables. Including extensive data on components and their correct implementation, the myths, misapplication, misconceptions, and fallacies that are common when discussing EMC/EMI will also be addressed and corrected.

Cryptographic Hardware and Embedded Systems -- CHES 2012 - Emmanuel Prouff 2012-09-05

This book constitutes the proceedings of the 14th International Workshop on Cryptographic Hardware and Embedded Systems, CHES 2012, held in Leuven, Belgium, in September 2012. The 32 papers presented together with 1 invited talk were carefully reviewed and selected from 120 submissions. The papers are organized in the following topical sections: intrusive attacks and countermeasures; masking; improved fault attacks and side channel analysis; leakage resiliency and security analysis; physically unclonable functions; efficient implementations; lightweight cryptography; we still love RSA; and hardware implementations.

FPGAs - Juan Jose Rodriguez Andina 2017-07-28

Field Programmable Gate Arrays (FPGAs) are currently recognized as the most suitable platform for the implementation of complex digital systems targeting an increasing number of industrial electronics applications. They cover a huge variety of application areas, such as: aerospace, food industry, art, industrial automation, automotive, biomedicine, process control, military, logistics, power electronics, chemistry,

sensor networks, robotics, ultrasound, security, and artificial vision. This book first presents the basic architectures of the devices to familiarize the reader with the fundamentals of FPGAs before identifying and discussing new resources that extend the ability of the devices to solve problems in new application domains. Design methodologies are discussed and application examples are included for some of these domains, e.g., mechatronics, robotics, and power systems.

[Handbook of Research on Advanced Trends in Microwave and Communication Engineering](#) - El Oualkadi, Ahmed 2016-08-25

Wireless communications have become invaluable in the modern world. The market is going through a revolutionary transformation as new technologies and standards endeavor to keep up with demand for integrated and low-cost mobile and wireless devices. Due to their ubiquity, there is also a need for a simplification of the design of wireless systems and networks. The Handbook of Research on Advanced Trends in Microwave and Communication Engineering showcases the current trends and approaches in the design and analysis of reconfigurable microwave devices, antennas for wireless applications, and wireless communication technologies. Outlining both theoretical and experimental approaches, this publication brings to light the unique design issues of this emerging research, making it an ideal reference source for engineers, researchers, graduate students, and IT professionals.

[Mergent OTC Industrial Manual](#) - 2003

Applied Reconfigurable Computing - Kentaro Sano 2015-03-30

This book constitutes the refereed proceedings of the 11th International Symposium on Applied Reconfigurable Computing, ARC 2015, held in Bochum, Germany, in April 2015. The 23 full papers and 20 short papers presented in this volume were carefully reviewed and selected from 85 submissions. They are organized in topical headings named: architecture and modeling; tools and compilers; systems and applications; network-on-a-chip; cryptography applications; extended abstracts of posters. In addition, the book contains invited papers on funded R&D - running and completed projects and Horizon 2020 funded projects.

Radio Frequency Identification Fundamentals and Applications - Cristina Turcu 2010-02-01

This book, entitled Radio Frequency Identification Fundamentals and Applications, Bringing Research to Practice, bridges the gap between theory and practice and brings together a variety of research results and practical solutions in the field of RFID. The book is a rich collection of articles written by people from all over the world: teachers, researchers, engineers, and technical people with strong background in the RFID area. Developed as a source of information on RFID technology, the book addresses a wide audience including designers for RFID systems, researchers, students and anyone who would like to learn about this field. At this point I would like to express my thanks to all scientists who were kind enough to contribute to the success of this project by presenting numerous technical studies and research results. However, we couldn't have published this book without the effort of InTech team. I wish to extend my most sincere gratitude to InTech publishing house for continuing to publish new, interesting and valuable books for all of us.

[Silicon Carbide Diodes Performance Characterization and Comparison With Silicon Devices](#) - 2003

Electric Power Conversion - Marian Gaiceanu 2019-05-15

The introductory chapter to this book is like traveling in a time machine into past, present, and future of electric power conversion. Archeological discoveries are being transformed into the discoveries of the future. The book is an incursion to electric power conversion through electromechanical power conversion, static power conversion, and applications in the field. Each of the above-mentioned sections analyzes the knowledge gained using the experimental results of valuable research projects. Novice readers will learn how energy is converted adequately and adapted to different consumers. Advanced readers will discover different kinds of modern solutions and tendencies in the field of electric power conversion.

Parallel Computational Technologies - Leonid Sokolinsky 2021-07-08

This book constitutes refereed proceedings of the 15th International Conference on Parallel Computational Technologies, PCT 2021, held in March-April 2021. Due to the COVID-19 pandemic the conference was held online. The 22 revised full papers presented were carefully reviewed and selected from 89 submissions. The

papers are organized in topical sections on high performance architectures, tools and technologies; parallel numerical algorithms; supercomputer simulation.

Monthly Catalog of United States Government Publications - 1994

Design of Transient Protection Systems - Nihal Kularatna 2018-11-30

Design of Transient Protection Systems: Including Supercapacitor Based Design Approaches for Surge Protectors is the only reference to consider surge protection for end-user equipment. This book fills the gap between academia and industry, presenting new product development approaches, such as the supercapacitor assisted surge absorber (SCASA) technique. It discusses protecting gear for modern electronic systems and consumer electronics, while also addressing the chain of design, development, implementation, recent theory and practice of developing transient surge protection systems. In addition, it considers all relevant technical aspects of testing commercial surge protectors, advances in surge protection products, components, and the abilities of commercial supercapacitors. Provides unique, patented techniques for transient protectors based on supercapacitors Includes recent advances in surge protection Links scattered information from within academia and industry with new product development approaches on surge protection for end-user equipment

Compound Semiconductor - 1999

Silicon Analog Components - Badih El-Kareh 2019-08-07

This book covers modern analog components, their characteristics, and interactions with process parameters. It serves as a comprehensive guide, addressing both the theoretical and practical aspects of modern silicon devices and the relationship between their electrical properties and processing conditions. Based on the authors' extensive experience in the development of analog devices, this book is intended for engineers and scientists in semiconductor research, development and manufacturing. The problems at the end of each chapter and the numerous charts, figures and tables also make it appropriate for use as a text in graduate and advanced undergraduate courses in electrical engineering and materials science. Enables engineers to understand analog device physics, and discusses important relations between process integration, device design, component characteristics, and reliability; Describes in step-by-step fashion the components that are used in analog designs, the particular characteristics of analog components, while comparing them to digital applications; Explains the second-order effects in analog devices, and trade-offs between these effects when designing components and developing an integrated process for their manufacturing.

Portable Design - 2004

[Characterisation of Soft Magnetic Materials Under Rotational Magnetisation](#) - Stanislaw Zurek 2017-11-22

The book presents practical aspects related to the measurement of rotational power loss in soft magnetic materials. The book furthermore focuses on practical aspects of performing such measurements, the associated difficulties as well as solutions to the most common problems. Numerous practical aspects, hands-on experience, and most commonly encountered pitfalls are heavily discussed in the book. The text begins with introduction to magnetism, then follows with definitions of measurement methods of rotational power loss from physical viewpoint. Two chapters describe and detail the various sensors which can be employed for such measurements as well as all the aspects of designing, making, and using a magnetising apparatus. A synthesis of the likely optimal design of a magnetising apparatus is also given, preceded with the full reasoning based on all the research carried out to date. Characterisation of Soft Magnetic Materials Under Rotational Magnetisation serves as an excellent starting point for any student having to perform magnetic measurements under rotational magnetisation, but also under 1D, 2D or 3D excitation. Because the methods, sensors, and apparatus are extensively discussed it will also be a great reference for more senior researchers and experts in the field. There is a whole chapter devoted to analysis of measurement uncertainty. This subject is rarely published for magnetic measurements, which makes it more difficult for all researchers to understand the concepts and methodology used in uncertainty estimation. This chapter not only introduces the whole subject, but also provides multiple step-by-step examples which can be easily

followed, from very simple cases to much more complex ones. All equations are presented with full SI units which greatly helps in practical application of the presented methodology. Each chapter is written in such a way that it can be studied on its own, so that the reader can focus only on the specific aspects, as required.

MOSFET Technologies for Double-Pole Four-Throw Radio-Frequency Switch - Viranjay M. Srivastava 2013-10-07

This book provides analysis and discusses the design of various MOSFET technologies which are used for the design of Double-Pole Four-Throw (DP4T) RF switches for next generation communication systems. The authors discuss the design of the (DP4T) RF switch by using the Double-Gate (DG) MOSFET, as well as the Cylindrical Surrounding double-gate (CSDG) MOSFET. The effect of HFO2 (high dielectric material) in the design of DG MOSFET and CSDG MOSFET is also explored. Coverage includes comparison of Single-gate MOSFET and Double-gate MOSFET switching parameters, as well as testing of MOSFETs parameters using image acquisition.

EDN, Electrical Design News - 2003

Control Components Using Si, GaAs, and GaN Technologies - Inder J. Bahl 2014-09-01

Control circuits are important parts of RF and microwave systems. Their compact size, high performance, and low cost have played a vital role in the development of cost effective solutions and new applications during the past quarter century. This book provides a comprehensive treatment of such circuits, including device operation and their models, basic circuit theory and designs, and applications. The unique features of this book include in-depth and comprehensive study of control circuits, extensive design equations and figures, treatment of practical aspect of circuits and description of fabrication technologies. It provides you with a broad view of solid state control circuits including various technologies and their comparison and up to date information.

Coherent Optics for Access Networks - Zhensheng Jia 2019-10-28

This book will highlight the motivation for coherent optics in access and introduce digital coherent optical system in detail, including advanced modulation formats, architecture of modulation and detection, and DSP flow for both transmitter and receiver. This book will also demonstrate potential approaches to re-design and re-engineer the digital coherent concept from long-haul and metro solutions to the access network, leveraging reduction in complexity and cost as well as the benefits of capacity increases and operational improvements. This book will illustrate the details on optimization of the digital, optical, and electrical complexity and standardization and interoperability.

Proceedings ettc2020 - AMA Service GmbH 2021-01-27

ettc2020 was the European telemetry event in 2020 and has been held held from 23.-24 June 2020 online with the claim "Collaboration and innovation in testing". The European Test and Telemetry Conference will showcase exhibitors, original technical papers and innovation ideas in Test, Telemetry, Telecontrol, Instrumentation and Recording technologies for industrial, automotive, scientific, aerospace, space, naval and military applications

The Market Guide - 1989

Secure System Design and Trustable Computing - Chip-Hong Chang 2015-09-17

This book provides the foundations for understanding hardware security and trust, which have become major concerns for national security over the past decade. Coverage includes issues related to security and trust in a variety of electronic devices and systems related to the security of hardware, firmware and software,

spanning system applications, online transactions and networking services. This serves as an invaluable reference to the state-of-the-art research that is of critical significance to the security of and trust in, modern society's microelectronic-supported infrastructures.

Advances in Semiconductor Technologies - An Chen 2022-10-11

Advances in Semiconductor Technologies Discover the broad sweep of semiconductor technologies in this uniquely curated resource Semiconductor technologies and innovations have been the backbone of numerous different fields: electronics, online commerce, the information and communication industry, and the defense industry. For over fifty years, silicon technology and CMOS scaling have been the central focus and primary driver of innovation in the semiconductor industry. Traditional CMOS scaling has approached some fundamental limits, and as a result, the pace of scientific research and discovery for novel semiconductor technologies is increasing with a focus on novel materials, devices, designs, architectures, and computer paradigms. In particular, new computing paradigms and systems—such as quantum computing, artificial intelligence, and Internet of Things—have the potential to unlock unprecedented power and application space. Advances in Semiconductor Technologies provides a comprehensive overview of selected semiconductor technologies and the most up-to-date research topics, looking in particular at mainstream developments in current industry research and development, from emerging materials and devices, to new computing paradigms and applications. This full-coverage volume gives the reader valuable insights into state-of-the-art advances currently being fabricated, a wide range of novel applications currently under investigation, and a glance into the future with emerging technologies in development. Advances in Semiconductor Technologies readers will also find: A comprehensive approach that ensures a thorough understanding of state-of-the-art technologies currently being fabricated Treatments on all aspects of semiconductor technologies, including materials, devices, manufacturing, modeling, design, architecture, and applications Articles written by an impressive team of international academics and industry insiders that provide unique insights into a wide range of topics Advances in Semiconductor Technologies is a useful, time-saving reference for electrical engineers working in industry and research, who are looking to stay abreast of rapidly advancing developments in semiconductor electronics, as well as academics in the field and government policy advisors.

Robust Electronic Design Reference Book: no special title - John R. Barnes 2004

If you design electronics for a living, you need Robust Electronic Design Reference Book. Written by a working engineer, who has put over 115 electronic products into production at Sycor, IBM, and Lexmark, Robust Electronic Design Reference covers all the various aspects of designing and developing electronic devices and systems that: -Work. -Are safe and reliable. -Can be manufactured, tested, repaired, and serviced. -May be sold and used worldwide. -Can be adapted or enhanced to meet new and changing requirements.

Trustworthy Reconfigurable Systems - Thomas Feller 2014-08-25

Thomas Feller sheds some light on trust anchor architectures for trustworthy reconfigurable systems. He is presenting novel concepts enhancing the security capabilities of reconfigurable hardware. Almost invisible to the user, many computer systems are embedded into everyday artifacts, such as cars, ATMs, and pacemakers. The significant growth of this market segment within the recent years enforced a rethinking with respect to the security properties and the trustworthiness of these systems. The trustworthiness of a system in general equates to the integrity of its system components. Hardware-based trust anchors provide measures to compare the system configuration to reference measurements. Reconfigurable architectures represent a special case in this regard, as in addition to the software implementation, the underlying hardware architecture may be exchanged, even during runtime.