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Build Your Own Printed Circuit Board - Al Williams 2003-10-15
FREE PCB SOFTWARE! The EagleCAD light software inside does all the tasks described in this book -- schematic capture, layout, and autorouting. Run it on Windows or Linux. DESIGN TO PRODUCTION -- EVERYTHING YOU NEED TO MAKE YOUR OWN PCBs With Build Your Own Printed Circuit Board, you can eliminate or reduce your company's reliance on outsourcing to board houses, and cut costs significantly. Perfect for advanced electronics hobbyists as well, this easy-to-follow guide is by far the most up-to-date source on making PCBs. Complete in itself, the handbook even gives you PCB CAD software, on CD, ready to run on either Windows or Linux. (Some PCB software costs from $10,000 to $15,000!) STEP-BY-STEP DIRECTIONS, AND A PRACTICE RUNTHROUGH Written by a PCB designer and electronics expert, Build Your Own Printed Circuit Board gives you absolutely everything you need to design and construct a professional-looking prototype or production-ready PCB files with modern CAD tools. You get: * Instructions for every phase of project flow, from design schematics, sizing, layout, and autorouting fabrication * The latest in PCB tips, tricks, and techniques * Cutting-edge tactics for shrinking boards * Guidance on generating CAM (computer-aided manufacturing) files to produce the board yourself or send it out * A sample project, demonstrating all the book's techniques, that you can build and use in practical applications * Discussions on using service bureaus to produce designs * Expert comparison of CAD program options THE BEST GUIDE TO BUILDING YOUR OWN PCBs!
Introduction to PSpice Manual, Using ORCad Release 9.2 to Accompany Electric Circuits, Seventh Edition - James William Nilsson 2005

Analog Design and Simulation Using OrCAD Capture and PSpice - Dennis Fitzpatrick 2017-11-29
New to this edition: Updated to using OrCAD Release 17.2 and its new features; Coverage of PSPICE extra features: PSpice Designer, PSpice Designer Plus, Modelling Application, PSpice Part Search Symbol Viewer, PSpice Report, Associate PSpice model, New delay functions for Behavioural Simulation Models, New Models, Support for negative values in hysteresis voltage and threshold

voltage; A new chapter on PSpice Advanced Analysis Analog Design and Simulation Using OrCAD Capture and PSpice, Second Edition provides step-by-step instructions on how to use the Cadence/OrCAD family of Electronic Design Automation software for analog design and simulation. The book explains how to enter schematics in Capture, set up project types, project libraries and prepare circuits for PSpice simulation. There are chapters on the different analysis types for DC Bias point, DC sweep, AC frequency sweep, Parametric analysis, Temperature analysis, Performance Analysis, Noise analysis, Sensitivity and Monte Carlo simulation. Subsequent chapters explain how the Stimulus Editor is used to define custom analog and digital signals, how the Model Editor is used to view and create new PSpice models and Capture parts and how the Magnetic Parts Editor is used to design transformers and inductors. Other chapters include Analog Behaviorial models, Test Benches as well as how to create hierarchical designs. The book includes the latest features in the OrCAD 17.2 release and there are exercises with step by step instructions at the end of each chapter that enables the reader to progress based upon their experience and knowledge gained from previous chapters. The author worked for Cadence for over eight years and supported and delivered OrCAD PSpice training courses all over Europe. This book has been endorsed by Cadence. In addition, there are new chapters on the PSpice Advanced Analysis suite of tools: Sensitivity Analysis, Optimizer, Monte Carlo, and Smoke Analysis.The chapters show how circuit performance can effectively be maximised and optimised for variations in component tolerances, temperature effects, manufacturing yields and component stress.

PSPICE and MATLAB for Electronics - John Okyere Attia 2010-06-23
Used collectively, PSPICE and MATLAB are unsurpassed for circuit modeling and data analysis. PSPICE can perform DC, AC, transient, Fourier, temperature, and Monte Carlo analysis of electronic circuits with device models and subsystem subcircuits. MATLAB can then carry out calculations of device parameters, curve fitting, numerical integration, nume

Xyce Parallel Electronic Simulator Reference Guide Version 6.4 - 2015
This document is a reference guide to the Xyce Parallel Electronic Simulator, and is a companion document to the Xyce Users' Guide [1] . The focus of this document is (to the extent possible) exhaustively list device parameters, solver options, parser options, and other usage details of Xyce . This document is not intended to be a tutorial. Users who are new to circuit simulation are better served by the Xyce Users' Guide [1] . Trademarks The information herein is subject to change without notice. Copyright c 2002-2015 Sandia Corporation. All rights reserved. Xyce TM Electronic Simulator and Xyce TM are trademarks of Sandia Corporation. Portions of the Xyce TM code are: Copyright c 2002, The Regents of the University of California. Produced at the Lawrence Livermore National Laboratory. Written by Alan Hindmarsh, Allan Taylor, Radu Serban. UCRL-CODE-2002-59 All rights reserved. Orcad, Orcad Capture, PSpice and Probe are registered trademarks of Cadence Design Systems, Inc. Microsoft, Windows and Windows 7 are registered trademarks of Microsoft Corporation. Medici, DaVinci and Taurus are registered trademarks of Synopsys Corporation. Amtec and TecPlot are trademarks of Amtec Engineering, Inc. Xyce 's expression library is based on that inside Spice 3F5 developed by the EECS Department at the

University of California. The EKV3 MOSFET model was developed by the EKV Team of the Electronics Laboratory-TUC of the Technical University of Crete. All other trademarks are property of their respective owners. Contacts Bug Reports (Sandia only) http://joseki.sandia.gov/bugzilla http://charleston.sandia.gov/bugzilla World Wide Web http://xyce.sandia.gov http://charleston.sandia.gov/xyce (Sandia only) Email xyce@sandia.gov (outside Sandia) xyce-sandia@sandia.gov (Sandia only).

The VLSI Handbook - Wai-Kai Chen 2019-07-17

Over the years, the fundamentals of VLSI technology have evolved to include a wide range of topics and a broad range of practices. To encompass such a vast amount of knowledge, The VLSI Handbook focuses on the key concepts, models, and equations that enable the electrical engineer to analyze, design, and predict the behavior of very large-scale integrated circuits. It provides the most up-to-date information on IC technology you can find. Using frequent examples, the Handbook stresses the fundamental theory behind professional applications. Focusing not only on the traditional design methods, it contains all relevant sources of information and tools to assist you in performing your job. This includes software, databases, standards, seminars, conferences and more. The VLSI Handbook answers all your needs in one comprehensive volume at a level that will enlighten and refresh the knowledge of experienced engineers and educate the novice. This one-source reference keeps you current on new techniques and procedures and serves as a review for standard practice. It will be your first choice when looking for a solution.

EDN. - 2006

Power-Switching Converters, Second Edition - Simon Ang 2005-03-17

After nearly a decade of success owing to its thorough coverage, abundance of problems and examples, and practical use of simulation and design, Power-Switching Converters enters its second edition with new and updated material, entirely new design case studies, and expanded figures, equations, and homework problems. This textbook is ideal for senior undergraduate or graduate courses in power electronic converters, requiring only systems analysis and basic electronics courses. The only text of such detail to also include the use of PSpice and step-by-step designs and simulations, Power-Switching Converters, Second Edition covers basic topologies, basic control techniques, and closed-loop control and stability. It also includes two new chapters on interleaved converters and switched capacitor converters, and the authors have added discrete-time modeling to the dynamic analysis of switching converters. The final two chapters are dedicated to simulation and complete design examples, respectively. PSpice examples and MATLAB scripts are available for download from the CRC Web site. These are useful for the simulation of students' designs. Class slides are also available on the Internet. Instructors will appreciate the breadth and depth of the material, more than enough to adapt into a customized syllabus. Students will similarly benefit from the more than 440 figures and over 1000 equations, ample homework problems, and case studies presented in this book.

A Designer's Guide to VHDL Synthesis - Douglas E. Ott 2013-12-19

A Designer's Guide to VHDL Synthesis is intended for both design engineers who

want to use VHDL-based logic synthesis ASICs and for managers who need to gain a practical understanding of the issues involved in using this technology. The emphasis is placed more on practical applications of VHDL and synthesis based on actual experiences, rather than on a more theoretical approach to the language. VHDL and logic synthesis tools provide very powerful capabilities for ASIC design, but are also very complex and represent a radical departure from traditional design methods. This situation has made it difficult to get started in using this technology for both designers and management, since a major learning effort and `culture' change is required. A Designer's Guide to VHDL Synthesis has been written to help design engineers and other professionals successfully make the transition to a design methodology based on VHDL and log synthesis instead of the more traditional schematic based approach. While there are a number of texts on the VHDL language and its use in simulation, little has been written from a designer's viewpoint on how to use VHDL and logic synthesis to design real ASIC systems. The material in this book is based on experience gained in successfully using these techniques for ASIC design and relies heavily on realistic examples to demonstrate the principles involved.
Standard Handbook for Electrical Engineers - Donald Fink 2006-08-25
The Standard Handbook for Electrical Engineers has served the EE field for nearly a century. Originally published in 1907, through 14 previous editions it has been a required resource for students and professionals. This new 15th edition features new material focusing on power generation and power systems operation – two longstanding strengths of the handbook that have recently become front-burner technology issues. At the same time, the entire format of the handbook will be streamlined, removing archaic sections and providing a quick, easy look-up experience.
The Circuits and Filters Handbook - Wai-Kai Chen 2002-12-23
A bestseller in its first edition, The Circuits and Filters Handbook has been thoroughly updated to provide the most current, most comprehensive information available in both the classical and emerging fields of circuits and filters, both analog and digital. This edition contains 29 new chapters, with significant additions in the areas of computer-
Handbook of Memristor Networks - Leon Chua 2019-11-12
This Handbook presents all aspects of memristor networks in an easy to read and tutorial style. Including many colour illustrations, it covers the foundations of memristor theory and applications, the technology of memristive devices, revised models of the Hodgkin-Huxley Equations and ion channels, neuromorphic architectures, and analyses of the dynamic behaviour of memristive networks. It also shows how to realise computing devices, non-von Neumann architectures and provides future building blocks for deep learning hardware. With contributions from leaders in computer science, mathematics, electronics, physics, material science and engineering, the book offers an indispensable source of information and an inspiring reference text for future generations of computer scientists, mathematicians, physicists, material scientists and engineers working in this dynamic field.
The Electrical Engineering Handbook - Six Volume Set - Richard C. Dorf 2018-12-14
In two editions spanning more than a decade, The Electrical Engineering

Handbook stands as the definitive reference to the multidisciplinary field of electrical engineering. Our knowledge continues to grow, and so does the Handbook. For the third edition, it has grown into a set of six books carefully focused on specialized areas or fields of study. Each one represents a concise yet definitive collection of key concepts, models, and equations in its respective domain, thoughtfully gathered for convenient access. Combined, they constitute the most comprehensive, authoritative resource available. Circuits, Signals, and Speech and Image Processing presents all of the basic information related to electric circuits and components, analysis of circuits, the use of the Laplace transform, as well as signal, speech, and image processing using filters and algorithms. It also examines emerging areas such as text to speech synthesis, real-time processing, and embedded signal processing. Electronics, Power Electronics, Optoelectronics, Microwaves, Electromagnetics, and Radar delves into the fields of electronics, integrated circuits, power electronics, optoelectronics, electromagnetics, light waves, and radar, supplying all of the basic information required for a deep understanding of each area. It also devotes a section to electrical effects and devices and explores the emerging fields of microlithography and power electronics. Sensors, Nanoscience, Biomedical Engineering, and Instruments provides thorough coverage of sensors, materials and nanoscience, instruments and measurements, and biomedical systems and devices, including all of the basic information required to thoroughly understand each area. It explores the emerging fields of sensors, nanotechnologies, and biological effects. Broadcasting and Optical Communication Technology explores communications, information theory, and devices, covering all of the basic information needed for a thorough understanding of these areas. It also examines the emerging areas of adaptive estimation and optical communication. Computers, Software Engineering, and Digital Devices examines digital and logical devices, displays, testing, software, and computers, presenting the fundamental concepts needed to ensure a thorough understanding of each field. It treats the emerging fields of programmable logic, hardware description languages, and parallel computing in detail. Systems, Controls, Embedded Systems, Energy, and Machines explores in detail the fields of energy devices, machines, and systems as well as control systems. It provides all of the fundamental concepts needed for thorough, in-depth understanding of each area and devotes special attention to the emerging area of embedded systems. Encompassing the work of the world's foremost experts in their respective specialties, The Electrical Engineering Handbook, Third Edition remains the most convenient, reliable source of information available. This edition features the latest developments, the broadest scope of coverage, and new material on nanotechnologies, fuel cells, embedded systems, and biometrics. The engineering community has relied on the Handbook for more than twelve years, and it will continue to be a platform to launch the next wave of advancements. The Handbook's latest incarnation features a protective slipcase, which helps you stay organized without overwhelming your bookshelf. It is an attractive addition to any collection, and will help keep each volume of the Handbook as fresh as your latest research.

Standard and Poor's MidCap 400 Guide 2001 - Standard & Poor's 2000-12

What do individual investors, money managers, analysts, brokers, and financial writers and editors have in common? All turn to Standard & Poor's, a division of the McGraw-Hill Companies, for securities information that is second to none. S&P's Guides, totally updated for 2002, deliver the same data and analyses used by today's top investment professionals. Each book puts these unique features at the reader's fingertips: -- Vital data on earnings, dividends, and share prices -- Key income and balance sheet statistics -- Exclusive S&P buy, sell, or hold recommendations for each stock -- Exclusive S&P outlook for every stock's price -- Computer-generated screens showing superior stock picks in different categories -- Company addresses, and numbers, and names of top officers Key information on America's medium-size, fast-growing companies.

Memristor Networks - Andrew Adamatzky 2013-12-18

Using memristors one can achieve circuit functionalities that are not possible to establish with resistors, capacitors and inductors, therefore the memristor is of great pragmatic usefulness. Potential unique applications of memristors are in spintronic devices, ultra-dense information storage, neuromorphic circuits and programmable electronics. Memristor Networks focuses on the design, fabrication, modelling of and implementation of computation in spatially extended discrete media with many memristors. Top experts in computer science, mathematics, electronics, physics and computer engineering present foundations of the memristor theory and applications, demonstrate how to design neuromorphic network architectures based on memristor assembles, analyse varieties of the dynamic behaviour of memristive networks and show how to realise computing devices from memristors. All aspects of memristor networks are presented in detail, in a fully accessible style. An indispensable source of information and an inspiring reference text, Memristor Networks is an invaluable resource for future generations of computer scientists, mathematicians, physicists and engineers.

Simulación de circuitos electrónicos con OrCAD® PSpice® - Camilo Quintáns Graña 2021-10-05

Si desea aprender a simular circuitos electrónicos y asentar sus conocimientos de electrónica mediante ejemplos prácticos de simulación, ha dado con el libro indicado. En esta segunda edición del libro Simulación de circuitos electrónicos con OrCAD® PSpice® se proporciona una detallada revisión y ampliación de los contenidos, así como una actualización a la versión 17.2 LITE. Los distintos temas abarcan desde los conceptos de simulación en la electrónica básica hasta aspectos más complejos de electrónica aplicada. Con un programa como el OrCAD PSpice, la simulación es una herramienta que contribuye a comprender de forma experimental cómo funcionan los circuitos. Se obtienen unos resultados que permiten corregir los diseños, tanto de los ejercicios de teoría como de los trabajos de laboratorio. En el capítulo 1 se presenta la simulación desde el punto de vista del diseño en la ingeniería orientada al producto, y en el capítulo 2 se introduce el paquete OrCAD 17.2 LITE, además de una descripción de sus programas, instalación y principales características. El capítulo 3 se dedica a la simulación de los sistemas digitales, desde los circuitos combinacionales hasta los microprogramados, pasando por el diseño jerárquico y la generación de estímulos. En el capítulo 4 se simulan circuitos analógicos, donde se incluyen distintas clases de dispositivos, así como

amplificadores operacionales, y se realizan los diferentes tipos de análisis. Los capítulos 5, 6 y 7 se dedican, respectivamente, al modelado y la simulación mediante comandos de PSpice. También a la creación de componentes nuevos, y a los análisis avanzados, como son el de Monte Carlo o el del Peor Caso, entre otros. El capítulo 8 se ocupa de los circuitos mixtos analógicos y digitales, como son los convertidores A/D y D/A, y otros ejemplos que combinan los distintos dominios de datos analógicos, digitales o temporales. En el capítulo 9 se simulan sensores y circuitos de acondicionamiento tomando como ejemplo distintos tipos de sensores. Finalmente, el capítulo 10 se centra en la simulación de circuitos de potencia, donde se incluyen los dispositivos de potencia, las inductancias y los transformadores, los reguladores, etc. Aprender a simular circuitos electrónicos de un modo práctico y sencillo está a su alcance. No espere más, hágase ya con su ejemplar y explote todo su potencial.
The SPICE Book - Andrei Vladimirescu 1994
This new book, written by Andre Vladimirescu, who was instrumental in the development of SPICE at the University of California Berkeley, introduces computer simulation of electrical and electronics circuits based on the SPICE standard. Relying on the functionality first supported in SPICE2 that is now supported in all SPICE programs, this text is addressed to all users of electrical simulation. The approach to learning circuit simulation is to interpret simulation results in relation to electrical engineering fundamentals; the book asks the student to solve most circuit examples by hand before verifying the results with SPICE. Addressed to both the SPICE novice and the experienced user, the first six chapters provide the relevant information on SPICE functionality for the analysis of linear as well as nonlinear circuits. Each of these chapters starts out with a linear example accessible to any new user of SPICE and proceeds with nonlinear transistor circuits. The latter part of the book goes into more detail on such issues as functional and hierarchical models, distortion analysis, basic algorithms in SPICE and related options parameters, and, how to direct SPICE to find a solution when it does not converge to a solution. The approach emphasizes that SPICE is not a substitute for knowledge of circuit operation but a complement. The SPICE Book is different from previously published books in the approach of solving circuit problems with a computer. The solution to most circuit examples is sketched out by hand first and followed by a SPICE verification. For more complex circuits it is not feasible to find the solution by hand but the approach stresses the need for the SPICE user tounderstand the results. Readers gain a better comprehension of SPICE thanks to the importance placed on the relation between EE fundamentals and computer simulation. The tutorial approach advances from the hand solution of a circuit to SPICE verification and simulation results interpretation. This book teaches the approach to electrical circuit simulation rather than a specific simulation program. Examples are simulated alternatively with SPICE2, SPICE3 or PSPICE. Accurate descriptions, simulation rationale and cogent explanations make this an invaluable reference.
Проектируем на VHDL - Евгений Перельройзен 2020-05-13
Книга посвящена проектированию цифровых систем с помощью языка описания аппаратуры VHDL (VHSIC Hardware Description Language).Первая часть книги

описывает процесс проектирования на языках описания аппаратуры.Во второй части книги рассматривается работа с VHDL в различных средах проектирования: ModelSim (Mentor Graphics), Active HDL (Aldec), OrCAD (Cadence), Warp (Cypress Semiconductor), Foundation Series (Xilinx) и Symphony (Symphony EDA).Третья часть книги содержит VHDL-модели ряда комбинационных и последовательностных цифровых схем.Предполагается знакомство читателя с основами программирования и проектирования цифровых устройств.Книга написана на основе преподавания курса языка VHDL и его приложений к моделированию цифровых систем в Еврейском университете (Иерусалим), Хайфском университете и филиале английского университета Ковентри в Израиле.

Analog Design and Simulation Using OrCAD Capture and PSpice - Dennis Fitzpatrick 2017-12-11

New to this edition: Updated to using OrCAD Release 17.2 and its new features; Coverage of PSPICE extra features: PSpice Designer, PSpice Designer Plus, Modelling Application, PSpice Part Search Symbol Viewer, PSpice Report, Associate PSpice model, New delay functions for Behavioural Simulation Models, New Models, Support for negative values in hysteresis voltage and threshold voltage; A new chapter on PSpice Advanced Analysis Analog Design and Simulation Using OrCAD Capture and PSpice, Second Edition provides step-by-step instructions on how to use the Cadence/OrCAD family of Electronic Design Automation software for analog design and simulation. The book explains how to enter schematics in Capture, set up project types, project libraries and prepare circuits for PSpice simulation. There are chapters on the different analysis types for DC Bias point, DC sweep, AC frequency sweep, Parametric analysis, Temperature analysis, Performance Analysis, Noise analysis, Sensitivity and Monte Carlo simulation. Subsequent chapters explain how the Stimulus Editor is used to define custom analog and digital signals, how the Model Editor is used to view and create new PSpice models and Capture parts and how the Magnetic Parts Editor is used to design transformers and inductors. Other chapters include Analog Behaviorial models, Test Benches as well as how to create hierarchical designs. The book includes the latest features in the OrCAD 17.2 release and there are exercises with step by step instructions at the end of each chapter that enables the reader to progress based upon their experience and knowledge gained from previous chapters. In addition, there are new chapters on the PSpice Advanced Analysis suite of tools: Sensitivity Analysis, Optimizer, Monte Carlo, and Smoke Analysis.The chapters show how circuit performance can effectively be maximised and optimised for variations in component tolerances, temperature effects, manufacturing yields and component stress. Provides both a comprehensive user guide and a detailed overview of simulation using OrCAD Capture and PSpice Includes worked and ready to try sample designs and a wide range of to-do exercises Covers Capture and PSpice together

PSpice for Digital Communications Engineering - Paul Tobin 2007

PSpice for Digital Communications Engineering shows how to simulate digital communication systems and modulation methods using the very powerful Cadence Orcad PSpice version 10.5 suite of software programs. Fourier series and Fourier transform are applied to signals to set the ground work for the modulation techniques introduced in later chapters. Various baseband signals,

including duo-binary baseband signaling, are generated and the spectra are examined to detail the unsuitability of these signals for accessing the public switched network. Pulse code modulation and time-division multiplexing circuits are examined and simulated where sampling and quantization noise topics are discussed. We construct a single-channel PCM system from transmission to receiver i.e. end-to-end, and import real speech signals to examine the problems associated with aliasing, sample and hold.Companding is addressed here and we look at the A and mu law characteristics for achieving better signal to quantization noise ratios. Several types of delta modulators are examined and also the concept of time divisionmultiplexing is considered. Multi-level signaling techniques such as QPSK andQAMare analyzed and simulated and 'home-made meters', such as scatter and eye meters, are used to assess the performance of these modulation systems in the presence of noise. The raised-cosine family of filters for shaping data before transmission is examined in depth where bandwidth efficiency and channel capacity is discussed. We plot several graphs in Probe to compare the efficiency of these systems. Direct spread spectrum is the last topic to be examined and simulated to show the advantages of spreading the signal over a wide bandwidth and giving good signal security at the same time.
CMOS - R. Jacob Baker 2008
This edition provides an important contemporary view of a wide range of analog/digital circuit blocks, the BSIM model, data converter architectures, and more. The authors develop design techniques for both long- and short-channel CMOS technologies and then compare the two.
Power-Switching Converters, Third Edition - Simon Ang 2010-12-20
Significantly expanded and updated with extensive revisions, new material, and a new chapter on emerging applications of switching converters, Power-Switching Converters, Third Edition offers the same trusted, accessible, and comprehensive information as its bestselling predecessors. Similar to the two previous editions, this book can be used for an introductory as well as a more advanced course. Chapters begin with an introduction to switching converters and basic switching converter topologies. Entry level chapters continue with a discussion of resonant converters, isolated switching converters, and the control schemes of switching converters. Skipping to chapters 10 and 11, the subject matter involves an examination of interleaved converters and switched capacitor converters to round out and complete the overview of switching converter topologies. More detailed chapters include the continuous time-modeling and discrete-time modeling of switching converters as well as analog control and digital control. Advanced material covers tools for the simulation of switching converters (including both PSpice and Matlab simulations) and the basic concepts necessary to understand various actual and emerging applications for switching converters, such as power factor correction, LED drivers, low-noise converters, and switching converters topologies for solar and fuel cells. The final chapter contains several complete design examples, including experimental designs that may be used as technical references or for class laboratory projects. Supplementary information is available at crcpress.com including slides, PSpice examples (designed to run on the OrCAD 9.2 student version and PSIM software) and MATLAB scripts. Continuing the august tradition

of its predecessors, Power-Switching Converters, Third Edition provides introductory and advanced information on all aspects of power switching converters to give students the solid foundation and applicable knowledge required to advance in this growing field.

Complete PCB Design Using OrCad Capture and Layout - Kraig Mitzner 2011-04-01

Complete PCB Design Using OrCad Capture and Layout provides instruction on how to use the OrCAD design suite to design and manufacture printed circuit boards. The book is written for both students and practicing engineers who need a quick tutorial on how to use the software and who need in-depth knowledge of the capabilities and limitations of the software package. There are two goals the book aims to reach: The primary goal is to show the reader how to design a PCB using OrCAD Capture and OrCAD Layout. Capture is used to build the schematic diagram of the circuit, and Layout is used to design the circuit board so that it can be manufactured. The secondary goal is to show the reader how to add PSpice simulation capabilities to the design, and how to develop custom schematic parts, footprints and PSpice models. Often times separate designs are produced for documentation, simulation and board fabrication. This book shows how to perform all three functions from the same schematic design. This approach saves time and money and ensures continuity between the design and the manufactured product. Information is presented in the exact order a circuit and PCB are designed Straightforward, realistic examples present the how and why the designs work, providing a comprehensive toolset for understanding the OrCAD software Introduction to the IPC, JEDEC, and IEEE standards relating to PCB design Full-color interior and extensive illustrations allow readers to learn features of the product in the most realistic manner possible

Creación de Nuevos Componentes para ORCAD 10.3 - Miguel Pareja Aparicio 2007-10

La gran cantidad de componentes que existen en el mercado hacen im - posible disponer de librerías con todos ellos. Además, existe la posibilidad de necesitar elementos que no se catalogan como dispositivos electrónicos para la representación de esquemas (Capture), o la simulación de sistemas no puramente electrónicos (Pspice), o la necesidad de nuevos ‘footprint’ para la creación de alguna de las placas de circuito impreso (Layout). Este libro no ha sido creado como complemento a unos estudios en particular, sino que puede ser de utilidad a cualquier estudiante que necesite disponer de algún componente en concreto para la realización de una placa o simulación de un circuito electrónico con ORCAD. Puede ser utilizado en ciclos formativos de la rama electrónica-electricidad o en estudios universitarios relacionados con la electrónica. Esta documentación se forjó durante la ejecución del proyecto final de ca - rrera y de diversas asignaturas de la carrera de Ingeniero Técnico de Telecomunicaciones, ante la necesidad de la creación de nuevos componentes, ya sean para la simulación de los distintos procesos o ante la nece - sidad de la implementación de diferentes componentes con elementos que no se encuentran disponibles en las librerías de ORCAD. Aunque se supone que el lector tiene conocimientos sobre ORCAD, se han incluido dos apéndices al final del libro como guía rápida para la creación de placas de circuito impreso con Layout, y una guía rápida para la simulación en Pspice. Lógicamente, sólo abarcan nociones muy generales que pueden servir para recordar algún concepto. De todas formas, al final se incluye una bibliografía sobre una gran cantidad de libros

que tratan el tema de simulación y creación de placas de circuito impreso que ofrecen una mayor información.
100 Power Tips for FPGA Designers -

VoIP Technologies - Shigeru Kashihara 2011-02-14
This book provides a collection of 15 excellent studies of Voice over IP (VoIP) technologies. While VoIP is undoubtedly a powerful and innovative communication tool for everyone, voice communication over the Internet is inherently less reliable than the public switched telephone network, because the Internet functions as a best-effort network without Quality of Service guarantee and voice data cannot be retransmitted. This book introduces research strategies that address various issues with the aim of enhancing VoIP quality. We hope that you will enjoy reading these diverse studies, and that the book will provide you with a lot of useful information about current VoIP technology research.
Schematic Capture with Cadence PSpice - Marc E. Herniter 2001
With step-by-step screen captures, this manual demonstrates how to use the Cadence(R)/Orcad(R) version of the "Pspice(R) circuit simulation program with the Orcad Capture(R) front end." Focusing on a wide range of circuits, it features a collection of examples that show how to create a circuit, how to run the different analyses, and how to obtain the results from those analyses. Chapter topics cover editing a basic schematic using Orcad capture, introduction to probe, DC nodal analysis, DC sweep, AC sweep, transient analysis, creating and modifying models using Orcad capture, digital simulations, and Monte Carlo analyses.
Complete PCB Design Using OrCAD Capture and PCB Editor - Kraig Mitzner 2009-05-28
This book provides instruction on how to use the OrCAD design suite to design and manufacture printed circuit boards. The primary goal is to show the reader how to design a PCB using OrCAD Capture and OrCAD Editor. Capture is used to build the schematic diagram of the circuit, and Editor is used to design the circuit board so that it can be manufactured. The book is written for both students and practicing engineers who need in-depth instruction on how to use the software, and who need background knowledge of the PCB design process. Beginning to end coverage of the printed circuit board design process. Information is presented in the exact order a circuit and PCB are designed Over 400 full color illustrations, including extensive use of screen shots from the software, allow readers to learn features of the product in the most realistic manner possible Straightforward, realistic examples present the how and why the designs work, providing a comprehensive toolset for understanding the OrCAD software Introduces and follows IEEE, IPC, and JEDEC industry standards for PCB design. Unique chapter on Design for Manufacture covers padstack and footprint design, and component placement, for the design of manufacturable PCB's FREE CD containing the OrCAD demo version and design files
Tactical Shooter Pro Gaming Performance Guide -
First Person Shooter tactics tips and tricks. Everything you'll ever need to know for your ultimate performance in FPS multilayer games like Call of Duty and Battlefield.

Latest Advances in Electrothermal Models - Krzysztof Górecki 2021-03-17
This book is devoted to the latest advances in the area of electrothermal modelling of electronic components and networks. It contains eight sections by different teams of authors. These sections contain the results of: (a) electro-thermal simulations of SiC power MOSFETs using a SPICE-like simulation program; (b) modelling thermal properties of inductors taking into account the influence of the core volume on the efficiency of heat removal; (c) investigations into the problem of inserting a temperature sensor in the neighbourhood of a chip to monitor its junction temperature; (d) computations of the internal temperature of power LEDs situated in modules containing multiple-power LEDs, taking into account both self-heating in each power LED and mutual thermal couplings between each diode; (e) analyses of DC-DC converters using the electrothermal averaged model of the diode–transistor switch, including an IGBT and a rapid-switching diode; (f) electrothermal modelling of SiC power BJTs; (g) analysis of the efficiency of selected algorithms used for solving heat transfer problems at nanoscale; (h) analysis related to thermal simulation of the test structure dedicated to heat-diffusion investigation at the nanoscale.
Complete PCB Design Using OrCAD Capture and PCB Editor - Kraig Mitzner 2019-06-21
Complete PCB Design Using OrCAD Capture and PCB Editor, Second Edition, provides practical instruction on how to use the OrCAD design suite to design and manufacture printed circuit boards. Chapters cover how to Design a PCB using OrCAD Capture and OrCAD PCB Editor, adding PSpice simulation capabilities to a design, how to develop custom schematic parts, how to create footprints and PSpice models, and how to perform documentation, simulation and board fabrication from the same schematic design. This book is suitable for both beginners and experienced designers, providing basic principles and the program's full capabilities for optimizing designs. Companion site https://www.elsevier.com/books-and-journals/book-companion/9780128176849
Analog Design and Simulation Using OrCAD Capture and PSpice - Dennis Fitzpatrick 2011-11-16
Anyone involved in circuit design that needs the practical know-how it takes to design a successful circuit or product, will find this practical guide to using Capture-PSpice (written by a former Cadence PSpice expert for Europe) an essential book. The text delivers step-by-step guidance on using Capture-PSpice to help professionals produce reliable, effective designs. Readers will learn how to get up and running quickly and efficiently with industry standard software and in sufficient detail to enable building upon personal experience to avoid common errors and pit-falls. This book is of great benefit to professional electronics design engineers, advanced amateur electronics designers, electronic engineering students and academic staff looking for a book with a real-world design outlook. Provides both a comprehensive user guide, and a detailed overview of simulation Each chapter has worked and ready to try sample designs and provides a wide range of to-do exercises Core skills are developed using a running case study circuit Covers Capture and PSpice together for the first time.
LABORATORY EXPERIMENTS AND PSPICE SIMULATIONS IN ANALOG ELECTRONICS - L. K. MAHESHWARI 2006-01-01

This laboratory manual for students of Electronics, Electrical, Instrumentation, Communication, and Computer engineering disciplines has been prepared in the form of a standalone text, offering the necessary theory and circuit diagrams with each experiment. Procedures for setting up the circuits and measuring and evaluating their performance are designed to support the material of the authors' book Analog Electronics (also published by PHI Learning). There are twenty-five experiments. The experiments cover the basic transistor circuits, the linear op-amp circuits, the active filters, the non-linear op-amp circuits, the signal generators, the voltage regulators, the power amplifiers, the high frequency amplifiers, and the data converters. In addition to the hands-on experiments using traditional test equipment and components, this manual describes the simulation of circuits using PSPICE as well. For PSPICE simulation, any available standard SPICE software may be used including the latest version OrCAD V10 Demo software. This feature allows the instructor to adopt a single laboratory manual for both types of experiments.
Nonlinear Dynamics of Electronic Systems - Valeri M. Mladenov 2014-06-30
This book constitutes the refereed proceedings of the 22nd International Conference on Nonlinear Dynamics of Electronic Systems, NDES 2014, held in Albena, Bulgaria, in July 2014. The 47 revised full papers presented were carefully reviewed and selected from 65 submissions. The papers are organized in topical sections on nonlinear oscillators, circuits and electronic systems; networks and nonlinear dynamics and nonlinear phenomena in biological and physiological systems.
Memristors and Memristive Systems - Ronald Tetzlaff 2013-12-11
This book provides a comprehensive overview of current research on memristors, memcapacitors and, meminductors. In addition to an historical overview of the research in this area, coverage includes the theory behind memristive circuits, as well as memcapacitance, and meminductance. Details are shown for recent applications of memristors for resistive random access memories, neuromorphic systems and hybrid CMOS/memristor circuits. Methods for the simulation of memristors are demonstrated and an introduction to neuromorphic modeling is provided.
Complete PCB Design Using OrCAD Capture and PCB Editor - Kraig Mitzner 2019-06-20
Complete PCB Design Using OrCAD Capture and PCB Editor, Second Edition, provides practical instruction on how to use the OrCAD design suite to design and manufacture printed circuit boards. Chapters cover how to Design a PCB using OrCAD Capture and OrCAD Layout, adding PSpice simulation capabilities to a design, how to develop custom schematic parts, how to create footprints and PSpice models, and how to perform documentation, simulation and board fabrication from the same schematic design. This book is suitable for both beginners and experienced designers, providing basic principles and the program's full capabilities for optimizing designs. Presents a fully updated edition on OrCAD Capture, Version 17.2 Combines the theoretical and practical parts of PCB design Includes real-life design examples that show how and why designs work, providing a comprehensive toolset for understanding OrCAD software Provides the exact order in which a circuit and PCB are designed Introduces the IPC, JEDEC and IEEE standards relating to PCB design

Complete Digital Design : A Comprehensive Guide to Digital Electronics and Computer System Architecture - Mark Balch 2003-06-20
This is a readable, hands-on self-tutorial through basic digital electronic design methods. The format and content allows readers faced with a design problem to understand its unique requirements and then research and evaluate the components and technologies required to solve it. * Begins with basic design elements and expands into full systems * Covers digital, analog, and full-system designs * Features real world implementation of complete digital systems
The Hitchhiker's Guide to PCB Design - Ema Design Automation 2019-02-19
Want to create a solid, manufacturable PCB the first time? Well, you're in luck. Get the only book you will ever need to upgrade your PCB knowledge and launch your career to new heights. Forget the school of hard-knocks and learn all the things industry experts wish they knew when starting out. With over 100 pages of content including checklists, pro-tips, and detailed illustrations, you'll gain decades of wisdom in a fraction of the time. Read the Hitchhikers Guide to PCB Design to be entertained and learn - How to create a robust and manufacturable PCB layout beyond routing the rats - Why it's important to incorporate DFX (Design for Excellence) and the many topics it covers - Who your project stakeholders are and why their involvement is essential for design success - PCB Design best practices you need to know and more BONUS- You can get a FREE digital download of the guide by visiting the EMA Design Automation website.
Electronic Design - 2007

The Ultimate AndroiDAQ Guide - Rick Fluck
The Ultimate AndroiDAQ Guide is an in-depth look into the techniques of data acquisition and process control, using the parallel processing micro-controller on the AndroiDAQ module. It teaches you sensing and electronic drive circuits, and how to implement these circuits in programming languages like Android, LabVIEW, Java, and Python. The book also shows you how to leverage and use the menu command structure used in the AndroiDAQ open source firmware, for the many data acquisition tasks that are used in robotic and product design. Many examples are given to allow you to control your AndroiDAQ module in ways other popular development modules can not, via USB, Bluetooth, or Wi-Fi communication. It is a guide to help you make your next project be part of the Internet of Things.