

Digital Electronics By Morris Mano

If you ally habit such a referred **digital electronics by morris mano** book that will pay for you worth, get the very best seller from us currently from several preferred authors. If you desire to funny books, lots of novels, tale, jokes, and more fictions collections are afterward launched, from best seller to one of the most current released.

You may not be perplexed to enjoy every ebook collections digital electronics by morris mano that we will unquestionably offer. It is not on the order of the costs. Its about what you habit currently. This digital electronics by morris mano, as one of the most on the go sellers here will no question be in the midst of the best options to review.

Foundation of Digital Electronics and Logic Design Subir Kumar Sarkar 2014-12-10 This book focuses on the basic principles of digital electronics and logic design. It is designed as a textbook for undergraduate students of electronics, electrical engineering, computer science, physics, and information technology. The text covers the syllabi of several Indian and foreign universities. It depicts the comprehensive resources on the recent ideas in the area of digital electronics explored by leading experts from both industry and academia. A good number of diagrams are provided to illustrate the concepts related to digital electronics so that students can easily comprehend the subject. Solved examples within the text explain the concepts discussed and exercises are provided at the end of each chapter.

Digital Logic and Computer Design M. Morris Mano 2017 This book presents the basic concepts used in the design and analysis of digital systems and introduces the principles of digital computer organization and design.

Digital Systems Jean-Pierre Deschamps 2016-10-12 This textbook for a one-semester course in Digital Systems Design describes the basic methods used to develop “traditional” Digital Systems, based on the use of logic gates and flip flops, as well as more advanced techniques that enable the design of very large circuits, based on Hardware Description Languages and Synthesis tools. It was originally designed to accompany a MOOC (Massive Open Online Course) created at the Autonomous University of Barcelona (UAB), currently available on the Coursera platform. Readers will learn what a digital system is and how it can be developed, preparing them for steps toward other technical disciplines, such as Computer Architecture, Robotics, Bionics, Avionics and others. In particular, students will learn to design digital systems of medium complexity, describe digital systems using high level hardware description languages, and understand the operation of computers at their most basic level. All concepts introduced are reinforced by plentiful illustrations, examples, exercises, and applications. For example, as an applied example of the design techniques presented, the authors demonstrate the synthesis of a simple processor, leaving the student in a position to enter the world of Computer Architecture and Embedded Systems.

Modern Digital Electronics R Jain 2006-08-21 Part of the McGraw-Hill Core Concepts Series, Modern Digital Electronics is an ideal textbook for a course on digital electronics at the undergraduate level. The text introduces digital systems and techniques through a bottom-up approach that allows users to start out with the basics of integrated circuits/circuit design and delve into topics such as digital design,

flip flops, A/D and D/A. The book then moves on to explore elements of complex digital circuits with material like FPGAs, PLDs, PLAs, and more. Rich pedagogical features include review questions with answers, a glossary of key terms, a large number of solved examples, and numerous practice problems. This is a concise, less expensive alternative to other digital logic designs. This series is edited by Dick Dorf.

Digital Design, Preview Ed. Frank Vahid 2009-11-17 Digital Design provides a modern approach to learning the increasingly important topic of digital systems design. The text's focus on register-transfer-level design and present-day applications not only leads to a better appreciation of computers and of today's ubiquitous digital devices, but also provides for a better understanding of careers involving digital design and embedded system design.1. Introduction2. Combinational Logic Design3. Sequential Logic Design-Controllers4. Datapath Components5. Register-Transfer Level (RTL) Design6. Optimizations and Tradeoffs7. Physical Implementation8. Programmable Processors9. Hardware Description Languages

Higher Engineering Mathematics John Bird 2017-04-07 Now in its eighth edition, Higher Engineering Mathematics has helped thousands of students succeed in their exams. Theory is kept to a minimum, with the emphasis firmly placed on problem-solving skills, making this a thoroughly practical introduction to the advanced engineering mathematics that students need to master. The extensive and thorough topic coverage makes this an ideal text for upper-level vocational courses and for undergraduate degree courses. It is also supported by a fully updated companion website with resources for both students and lecturers. It has full solutions to all 2,000 further questions contained in the 277 practice exercises.

Digital System Design using FSMs Peter D. Minns 2021-06-23 Explore this concise guide perfect for practicing digital designers and students of electronic engineering who work in or study embedded systems Digital System Design using FSMs: A Practical Learning Approach delivers a thorough update on the author's earlier work, FSM-Based Digital Design using Verilog HDL. The new book retains the foundational content from the first book while including refreshed content to cover the design of Finite State Machines delivered in a linear programmed learning format. The author describes a different form of State Machines based on Toggle Flip Flops and Data Flip Flops. The book includes many figures of which 15 are Verilog HDL simulations that readers can use to test out the design methods described in the book, as well as 19 Logisim simulation files with figures. Additional circuits are also contained within the Wiley web folder. It has tutorials and exercises, including comprehensive coverage of real-world examples demonstrated alongside the frame-by-frame presentations of the techniques used. In addition to covering the necessary Boolean algebra in sufficient detail for the reader to implement the FSM based systems used in the book, readers will also benefit from the inclusion of: A thorough introduction to finite-state machines and state diagrams for the design of electronic circuits and systems An exploration of using state diagrams to control external hardware subsystems Discussions of synthesizing hardware from a state diagram, synchronous and asynchronous finite-state machine designs, and testing finite-state machines using a test-bench module A treatment of the One Hot Technique in finite-state machine design An examination of Verilog HDL, including its elements An analysis of Petri-Nets including both sequential and parallel system design Suitable for design engineers and senior technicians seeking to enhance their skills in developing digital systems, Digital System Design using FSMs: A Practical Learning Approach will also earn a place in the libraries of undergraduate and graduate electrical and electronic engineering students and researchers.

Digital Design and Computer Architecture Sarah Harris 2015-04-09 Digital Design and Computer

Downloaded from avenza-dev.avenza.com
on December 4, 2022 by guest

Architecture: ARM Edition covers the fundamentals of digital logic design and reinforces logic concepts through the design of an ARM microprocessor. Combining an engaging and humorous writing style with an updated and hands-on approach to digital design, this book takes the reader from the fundamentals of digital logic to the actual design of an ARM processor. By the end of this book, readers will be able to build their own microprocessor and will have a top-to-bottom understanding of how it works. Beginning with digital logic gates and progressing to the design of combinational and sequential circuits, this book uses these fundamental building blocks as the basis for designing an ARM processor. SystemVerilog and VHDL are integrated throughout the text in examples illustrating the methods and techniques for CAD-based circuit design. The companion website includes a chapter on I/O systems with practical examples that show how to use the Raspberry Pi computer to communicate with peripheral devices such as LCDs, Bluetooth radios, and motors. This book will be a valuable resource for students taking a course that combines digital logic and computer architecture or students taking a two-quarter sequence in digital logic and computer organization/architecture. Covers the fundamentals of digital logic design and reinforces logic concepts through the design of an ARM microprocessor. Features side-by-side examples of the two most prominent Hardware Description Languages (HDLs)—SystemVerilog and VHDL—which illustrate and compare the ways each can be used in the design of digital systems. Includes examples throughout the text that enhance the reader's understanding and retention of key concepts and techniques. The Companion website includes a chapter on I/O systems with practical examples that show how to use the Raspberry Pi computer to communicate with peripheral devices such as LCDs, Bluetooth radios, and motors. The Companion website also includes appendices covering practical digital design issues and C programming as well as links to CAD tools, lecture slides, laboratory projects, and solutions to exercises.

Digital Design M. Morris Mano 2012-01 Digital Design, fifth edition is a modern update of the classic authoritative text on digital design. This book teaches the basic concepts of digital design in a clear, accessible manner. The book presents the basic tools for the design of digital circuits and provides procedures suitable for a variety of digital applications.

Logic and Computer Design Fundamentals M. Morris Mano 2004 Featuring a strong emphasis on the fundamentals underlying contemporary logic design using hardware description languages, synthesis and verification, this text focuses on the ever-evolving applications of basic computer design concepts.

Digital Design M. Morris Mano 2013 For courses on digital design in an Electrical Engineering, Computer Engineering, or Computer Science department. Digital Design, fifth edition is a modern update of the classic authoritative text on digital design. This book teaches the basic concepts of digital design in a clear, accessible manner. The book presents the basic tools for the design of digital circuits and provides procedures suitable for a variety of digital applications.

Complete Digital Design: A Comprehensive Guide to Digital Electronics and Computer System Architecture Mark Balch 2003-06-22 YOUR ONE-STOP RESOURCE FOR DIGITAL SYSTEM DESIGN! The explosion in communications and embedded computing technologies has brought with it a host of new skill requirements for electrical and electronics engineers, students, and hobbyists. With engineers expected to have such diverse expertise, they need comprehensive, easy-to-understand guidance on the fundamentals of digital design. Enter McGraw-Hill's Complete Digital Design. Written by an experienced electrical engineer and networking hardware designer, this book helps you understand and navigate the interlocking components, architectures, and practices necessary to design and implement digital systems. It includes: * Real world implementation of microprocessor-based digital systems *

Downloaded from avenza-dev.avenza.com
on December 4, 2022 by guest

Broad presentation of supporting analog circuit principles * Building complete systems with basic design elements and the latest technologies Complete Digital Design will teach you how to develop a customized set of requirements for any design problem—and then research and evaluate available components and technologies to solve it. Perfect for the professional, the student, and the hobbyist alike, this is one volume you need handy at all times! What you'll find inside: * Digital logic and timing analysis * Integrated circuits * Microprocessor and computer architecture * Memory technologies * Networking and serial communications * Finite state machine design * Programmable logic: CPLD and FPGA * Analog circuit basics * Diodes, transistors, and operational amplifiers * Analog-to-digital conversion * Voltage regulation * Signal integrity and PCB design * And more!

Digital Logic & Computer Design Mano 1979-09

Schaum's Outline of Theory and Problems of Basic Circuit Analysis John O'Malley 1982 Confusing Textbooks? Missed Lectures? Not Enough Time?. . Fortunately for you, there's Schaum's Outlines. More than 40 million students have trusted Schaum's to help them succeed in the classroom and on exams. Schaum's is the key to faster learning and higher grades in every subject. Each Outline presents all the essential course information in an easy-to-follow, topic-by-topic format. You also get hundreds of examples, solved problems, and practice exercises to test your skills. . . This Schaum's Outline gives you. . Practice problems with full explanations that reinforce knowledge. Coverage of the most up-to-date developments in your course field. In-depth review of practices and applications. . . Fully compatible with your classroom text, Schaum's highlights all the important facts you need to know. Use Schaum's to shorten your study time-and get your best test scores!. . Schaum's Outlines-Problem Solved. . .

Digital Principles and Design Donald D. Givone 2003

Digital Design M. Morris Mano 2007 CD-ROM contains: evaluation versions of Synapticad's WaveFormer Pro -- TestBench Pro -- Verilogger Pro -- DataSheet Pro -- TimeDiagrammer Pro -- author-supplied HDL example files.

Digital Logic Design Brian Holdsworth 2002-11-01 New, updated and expanded topics in the fourth edition include: EBCDIC, Grey code, practical applications of flip-flops, linear and shaft encoders, memory elements and FPGAs. The section on fault-finding has been expanded. A new chapter is dedicated to the interface between digital components and analog voltages. *A highly accessible, comprehensive and fully up to date digital systems text *A well known and respected text now revamped for current courses *Part of the Newnes suite of texts for HND/1st year modules

Verilog HDL Samir Palnitkar 2003 VERILOG HDL, Second Edition by Samir Palnitkar With a Foreword by Prabhu Goel Written for both experienced and new users, this book gives you broad coverage of Verilog HDL. The book stresses the practical design and verification perspective of Verilog rather than emphasizing only the language aspects. The information presented is fully compliant with the IEEE 1364-2001 Verilog HDL standard. Among its many features, this edition- bull; bull; Describes state-of-the-art verification methodologies bull; Provides full coverage of gate, dataflow (RTL), behavioral and switch modeling bull; Introduces you to the Programming Language Interface (PLI) bull; Describes logic synthesis methodologies bull; Explains timing and delay simulation bull; Discusses user-defined primitives bull; Offers many practical modeling tips Includes over 300 illustrations, examples, and exercises, and a Verilog resource list. Learning objectives and summaries are provided for each chapter. About the CD-ROM The CD-ROM contains a Verilog simulator with a graphical user interface and the

Downloaded from avenza-dev.avenza.com
on December 4, 2022 by guest

source code for the examples in the book. What people are saying about Verilog HDL- "Mr. Palnitkar illustrates how and why Verilog HDL is used to develop today's most complex digital designs. This book is valuable to both the novice and the experienced Verilog user. I highly recommend it to anyone exploring Verilog-based design." -Rajeev Madhavan, Chairman and CEO, Magma Design Automation "This book is unique in its breadth of information on Verilog and Verilog-related topics. It is fully compliant with the IEEE 1364-2001 standard, contains all the information that you need on the basics, and devotes several chapters to advanced topics such as verification, PLI, synthesis and modeling techniques." -Michael McNamara, Chair, IEEE 1364-2001 Verilog Standards Organization This has been my favorite Verilog book since I picked it up in college. It is the only book that covers practical Verilog. A must have for beginners and experts." -Berend Ozceri, Design Engineer, Cisco Systems, Inc. "Simple, logical and well-organized material with plenty of illustrations, makes this an ideal textbook." -Arun K. Somani, Jerry R. Junkins Chair Professor, Department of Electrical and Computer Engineering, Iowa State University, Ames PRENTICE HALL Professional Technical Reference Upper Saddle River, NJ 07458 www.phptr.com ISBN: 0-13-044911-3

Digital Electronics and Design with VHDL Volnei A. Pedroni 2008-01-25 Digital Electronics and Design with VHDL offers a friendly presentation of the fundamental principles and practices of modern digital design. Unlike any other book in this field, transistor-level implementations are also included, which allow the readers to gain a solid understanding of a circuit's real potential and limitations, and to develop a realistic perspective on the practical design of actual integrated circuits. Coverage includes the largest selection available of digital circuits in all categories (combinational, sequential, logical, or arithmetic); and detailed digital design techniques, with a thorough discussion on state-machine modeling for the analysis and design of complex sequential systems. Key technologies used in modern circuits are also described, including Bipolar, MOS, ROM/RAM, and CPLD/FPGA chips, as well as codes and techniques used in data storage and transmission. Designs are illustrated by means of complete, realistic applications using VHDL, where the complete code, comments, and simulation results are included. This text is ideal for courses in Digital Design, Digital Logic, Digital Electronics, VLSI, and VHDL; and industry practitioners in digital electronics. Comprehensive coverage of fundamental digital concepts and principles, as well as complete, realistic, industry-standard designs. Many circuits shown with internal details at the transistor-level, as in real integrated circuits. Actual technologies used in state-of-the-art digital circuits presented in conjunction with fundamental concepts and principles. Six chapters dedicated to VHDL-based techniques, with all VHDL-based designs synthesized onto CPLD/FPGA chips.

Multimedia Forensics and Security Li, Chang-Tsun 2008-07-31 As information technology is rapidly progressing, an enormous amount of media can be easily exchanged through Internet and other communication networks. Increasing amounts of digital image, video, and music have created numerous information security issues and is now taken as one of the top research and development agendas for researchers, organizations, and governments worldwide. *Multimedia Forensics and Security* provides an in-depth treatment of advancements in the emerging field of multimedia forensics and security by tackling challenging issues such as digital watermarking for copyright protection, digital fingerprinting for transaction tracking, and digital camera source identification.

Computer Systems Ata Elahi 2017-11-08 This textbook covers digital design, fundamentals of computer architecture, and assembly language. The book starts by introducing basic number systems, character coding, basic knowledge in digital design, and components of a computer. The book goes on to discuss information representation in computing; Boolean algebra and logic gates; sequential logic; input/output; and CPU performance. The author also covers ARM architecture, ARM instructions and

ARM assembly language which is used in a variety of devices such as cell phones, digital TV, automobiles, routers, and switches. The book contains a set of laboratory experiments related to digital design using Logisim software; in addition, each chapter features objectives, summaries, key terms, review questions and problems. The book is targeted to students majoring Computer Science, Information System and IT and follows the ACM/IEEE 2013 guidelines. • Comprehensive textbook covering digital design, computer architecture, and ARM architecture and assembly • Covers basic number system and coding, basic knowledge in digital design, and components of a computer • Features laboratory exercises in addition to objectives, summaries, key terms, review questions, and problems in each chapter

Digital Electronics 1 Tertulien Ndjountche 2016-06-17 The omnipresence of electronic devices in our everyday lives has been accompanied by the downscaling of chip feature sizes and the ever increasing complexity of digital circuits. This book is devoted to the analysis and design of digital circuits, where the signal can assume only two possible logic levels. It deals with the basic principles and concepts of digital electronics. It addresses all aspects of combinational logic and provides a detailed understanding of logic gates that are the basic components in the implementation of circuits used to perform functions and operations of Boolean algebra. Combinational logic circuits are characterized by outputs that depend only on the actual input values. Efficient techniques to derive logic equations are proposed together with methods of analysis and synthesis of combinational logic circuits. Each chapter is well structured and is supplemented by a selection of solved exercises covering logic design practices.

Digital Design M. Morris Mano 2018

Digital Design (cd) 3rd Edition Mano 2006-02-01

Digital Electronics Anil K. Maini 2007-09-27 The fundamentals and implementation of digital electronics are essential to understanding the design and working of consumer/industrial electronics, communications, embedded systems, computers, security and military equipment. Devices used in applications such as these are constantly decreasing in size and employing more complex technology. It is therefore essential for engineers and students to understand the fundamentals, implementation and application principles of digital electronics, devices and integrated circuits. This is so that they can use the most appropriate and effective technique to suit their technical need. This book provides practical and comprehensive coverage of digital electronics, bringing together information on fundamental theory, operational aspects and potential applications. With worked problems, examples, and review questions for each chapter, Digital Electronics includes: information on number systems, binary codes, digital arithmetic, logic gates and families, and Boolean algebra; an in-depth look at multiplexers, demultiplexers, devices for arithmetic operations, flip-flops and related devices, counters and registers, and data conversion circuits; up-to-date coverage of recent application fields, such as programmable logic devices, microprocessors, microcontrollers, digital troubleshooting and digital instrumentation. A comprehensive, must-read book on digital electronics for senior undergraduate and graduate students of electrical, electronics and computer engineering, and a valuable reference book for professionals and researchers.

Digital Design, Global Edition M. Morris Mano 2018-05-24 For introductory courses on digital design in an Electrical Engineering, Computer Engineering, or Computer Science department. A clear and accessible approach to teaching the basic tools, concepts, and applications of digital design. A modern update to a classic, authoritative text, Digital Design, 6th Edition teaches the fundamental concepts of digital design in a clear, accessible manner. The text presents the basic tools for the design of digital

circuits and provides procedures suitable for a variety of digital applications. Like the previous editions, this edition of Digital Design supports a multimodal approach to learning, with a focus on digital design, regardless of language. Recognising that three public-domain languages-Verilog, VHDL, and SystemVerilog-all play a role in design flows for today's digital devices, the 6th Edition offers parallel tracks of presentation of multiple languages, but allows concentration on a single, chosen language.

Digital Fundamentals, Global Edition Thomas L Floyd 2015-03-05 For courses in digital circuits, digital systems (including design and analysis), digital fundamentals, digital logic, and introduction to computers Digital Fundamentals, 11th Edition, continues its long and respected tradition of offering students a strong foundation in the core fundamentals of digital technology, providing basic concepts reinforced by plentiful illustrations, examples, exercises, and applications. Teaching and Learning Experience: Provides a strong foundation in the core fundamentals of digital technology. Covers basic concepts reinforced by plentiful illustrations, examples, exercises, and applications. Offers a full-colour design, effective chapter organisation, and clear writing that help students grasp complex concepts. The full text downloaded to your computer With eBooks you can: search for key concepts, words and phrases make highlights and notes as you study share your notes with friends eBooks are downloaded to your computer and accessible either offline through the Bookshelf (available as a free download), available online and also via the iPad and Android apps. Upon purchase, you'll gain instant access to this eBook. Time limit The eBooks products do not have an expiry date. You will continue to access your digital ebook products whilst you have your Bookshelf installed.

Introduction to Digital Logic Design John Patrick Hayes 1993 A college text for a one- or two-term first course in digital logic design at about the sophomore or junior level. It covers the basics of switching theory and logic design necessary to analyze and design combinational and sequential logic circuits at switch, gate, and register (or register-transfer

Fundamentals of Power Electronics Robert W. Erickson 2020 Fundamentals of Power Electronics, Third Edition, is an up-to-date and authoritative text and reference book on power electronics. This new edition retains the original objective and philosophy of focusing on the fundamental principles, models, and technical requirements needed for designing practical power electronic systems while adding a wealth of new material. Improved features of this new edition include: new material on switching loss mechanisms and their modeling; wide bandgap semiconductor devices; a more rigorous treatment of averaging; explanation of the Nyquist stability criterion; incorporation of the Tan and Middlebrook model for current programmed control; a new chapter on digital control of switching converters; major new chapters on advanced techniques of design-oriented analysis including feedback and extra-element theorems; average current control; new material on input filter design; new treatment of averaged switch modeling, simulation, and indirect power; and sampling effects in DCM, CPM, and digital control. Fundamentals of Power Electronics, Third Edition, is intended for use in introductory power electronics courses and related fields for both senior undergraduates and first-year graduate students interested in converter circuits and electronics, control systems, and magnetic and power systems. It will also be an invaluable reference for professionals working in power electronics, power conversion, and analog and digital electronics. Includes an increased number of end of chapter problems; Updated and reorganized, including three completely new chapters; Includes key principles and a rigorous treatment of topics.

Digital Design John F. Wakerly 2001 CD-ROM contains: Xilinx student edition foundation series software.

Digital Design: International Version John F Wakerly 2010-06-18 With over 30 years of experience in both industrial and university settings, the author covers the most widespread logic design practices while building a solid foundation of theoretical and engineering principles for students to use as they go forward in this fast moving field.

Digital Electronics 2 Tertulien Ndjountche 2016-08-29 As electronic devices become increasingly prevalent in everyday life, digital circuits are becoming even more complex and smaller in size. This book presents the basic principles of digital electronics in an accessible manner, allowing the reader to grasp the principles of combinational and sequential logic and the underlying techniques for the analysis and design of digital circuits. Providing a hands-on approach, this work introduces techniques and methods for establishing logic equations and designing and analyzing digital circuits. Each chapter is supplemented with practical examples and well-designed exercises with worked solutions. This second of three volumes focuses on sequential and arithmetic logic circuits. It covers various aspects related to the following topics: latch and flip-flop; binary counters; shift registers; arithmetic and logic circuits; digital integrated circuit technology; semiconductor memory; programmable logic circuits. Along with the two accompanying volumes, this book is an indispensable tool for students at a bachelors or masters level seeking to improve their understanding of digital electronics, and is detailed enough to serve as a reference for electronic, automation and computer engineers.

FUNDAMENTALS OF DIGITAL CIRCUITS A. ANAND KUMAR, 2016-07-18 The Fourth edition of this well-received text continues to provide coherent and comprehensive coverage of digital circuits. It is designed for the undergraduate students pursuing courses in areas of engineering disciplines such as Electrical and Electronics, Electronics and Communication, Electronics and Instrumentation, Telecommunications, Medical Electronics, Computer Science and Engineering, Electronics, and Computers and Information Technology. It is also useful as a text for MCA, M.Sc. (Electronics) and M.Sc. (Computer Science) students. Appropriate for self study, the book is useful even for AMIE and grad IETE students. Written in a student-friendly style, the book provides an excellent introduction to digital concepts and basic design techniques of digital circuits. It discusses Boolean algebra concepts and their application to digital circuitry, and elaborates on both combinational and sequential circuits. It provides numerous fully worked-out, laboratory tested examples to give students a solid grounding in the related design concepts. It includes a number of short questions with answers, review questions, fill in the blanks with answers, multiple choice questions with answers and exercise problems at the end of each chapter.

Digital Design M. Morris Mano 2002 For sophomore courses on digital design in an Electrical Engineering, Computer Engineering, or Computer Science department. & Digital Design, fourth edition is a modern update of the classic authoritative text on digital design.& This book teaches the basic concepts of digital design in a clear, accessible manner. The book presents the basic tools for the design of digital circuits and provides procedures suitable for a variety of digital applications.

Digital Principles and Logic Design Arijit Saha 2009-01-28 This text and reference provides students and practicing engineers with an introduction to the classical methods of designing electrical circuits, but incorporates modern logic design techniques used in the latest microprocessors, microcontrollers, microcomputers, and various LSI components. The book provides a review of the classical methods e.g., the basic concepts of Boolean algebra, combinational logic and sequential logic procedures, before engaging in the practical design approach and the use of computer-aided tools. The book is enriched with numerous examples (and their solutions), over 500 illustrations, and includes a CD-ROM with simulations, additional figures, and third party software to illustrate the concepts discussed in the book.

Introduction to Logic Circuits & Logic Design with Verilog Brock J. LaMeris 2017-04-17 This textbook for courses in Digital Systems Design introduces students to the fundamental hardware used in modern computers. Coverage includes both the classical approach to digital system design (i.e., pen and paper) in addition to the modern hardware description language (HDL) design approach (computer-based). Using this textbook enables readers to design digital systems using the modern HDL approach, but they have a broad foundation of knowledge of the underlying hardware and theory of their designs. This book is designed to match the way the material is actually taught in the classroom. Topics are presented in a manner which builds foundational knowledge before moving onto advanced topics. The author has designed the presentation with learning Goals and assessment at its core. Each section addresses a specific learning outcome that the student should be able to “do” after its completion. The concept checks and exercise problems provide a rich set of assessment tools to measure student performance on each outcome.

Modern Digital Design and Switching Theory Eugene D. Fabricius 2017-12-14 Modern Digital Design and Switching Theory is an important text that focuses on promoting an understanding of digital logic and the computer programs used in the minimization of logic expressions. Several computer approaches are explained at an elementary level, including the Quine-McCluskey method as applied to single and multiple output functions, the Shannon expansion approach to multilevel logic, the Directed Search Algorithm, and the method of Consensus. Chapters 9 and 10 offer an introduction to current research in field programmable devices and multilevel logic synthesis. Chapter 9 covers more advanced topics in programmed logic devices, including techniques for input decoding and Field-Programmable Gate Arrays (FPGAs). Chapter 10 includes a discussion of boolean division, kernels and factoring, boolean tree structures, rectangle covering, binary decision diagrams, and if-then-else operators. Computer algorithms covered in these two chapters include weak division, iterative weak division, and kernel extraction by tabular methods and by rectangle covering theory. Modern Digital Design and Switching Theory is an excellent textbook for electrical and computer engineering students, in addition to a worthwhile reference for professionals working with integrated circuits.

SWITCHING THEORY AND LOGIC DESIGN A. ANAND KUMAR 2014-03-06 This comprehensive text on switching theory and logic design is designed for the undergraduate students of electronics and communication engineering, electrical and electronics engineering, electronics and instrumentation engineering, telecommunication engineering, computer science and engineering, and information technology. It will also be useful to AMIE, IETE and diploma students. Written in a student-friendly style, this book, now in its Second Edition, provides an in-depth knowledge of switching theory and the design techniques of digital circuits. Striking a balance between theory and practice, it covers topics ranging from number systems, binary codes, logic gates and Boolean algebra to minimization using K-maps and tabular method, design of combinational logic circuits, synchronous and asynchronous sequential circuits, and algorithmic state machines. The book discusses threshold gates and programmable logic devices (PLDs). In addition, it elaborates on flip-flops and shift registers. Each chapter includes several fully worked-out examples so that the students get a thorough grounding in related design concepts. Short questions with answers, review questions, fill in the blanks, multiple choice questions and problems are provided at the end of each chapter. These help the students test their level of understanding of the subject and prepare for examinations confidently. NEW TO THIS EDITION • VHDL programs at the end of each chapter • Complete answers with figures • Several new problems with answers

Computer System Architecture M. Morris Mano 2005-04-07

Digital Integrated Circuits Thomas A. DeMassa 1996 Contains the most extensive coverage of digital integrated circuits available in a single source. Provides complete qualitative descriptions of circuit operation followed by in-depth analytical analyses and spice simulations. The circuit families described in detail are transistor-transistor logic (TTL, STTL, and ASTTL), emitter-coupled logic (ECL), NMOS logic, CMOS logic, dynamic CMOS, BiCMOS structures and various GASFET technologies. In addition to detailed presentation of the basic inverter circuits for each digital logic family, complete details of other logic circuits for these families are presented.