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Digital Logic Design Digital Design Techniques and Exercises Digital Logic Design Digital Logic Design Logic Design of Digital Systems Introduction to Digital Logic Design DIGITAL LOGIC DESIGN Digital Principles and Logic Design Digital Logic and Computer Design Digital Logic Design Principles Digital Logic Design Principles of Modern Digital Design DIGITAL ELECTRONICS AND LOGIC DESIGN Electrical and Computer Engineering Digital Circuits and Logic Design Design of Digital Systems and Devices Practical Digital Logic Design and Testing Foundation of Digital Electronics and Logic Design Digital Logic Design Digital Logic Design A Systematic Approach to Digital Logic Design A Systematic Approach to Digital Logic Design Digital Logic Introduction to Logic Circuits & Logic Design with Verilog Digital Logic Design Using Verilog Advanced Digital Logic Design Digital Logic Design Contemporary Logic Design Advanced Digital Design with the Verilog HDL Fundamentals of Digital Logic with Verilog Design Digital Logic Techniques Digital Logic Advanced Digital Design with the Verilog HDL Logic and System Design of Digital Systems Foundations of Digital Logic Design Design of Digital Systems and Devices Digital Logic: Applications And Design Digital Principles and Logic Design Solutions manual Digital Logic Design- A Complete Overciew

Digital Logic Design

2014-05-12

digital logic design second edition provides a basic understanding of digital logic design with emphasis on the two alternative methods of design available to the digital engineer this book describes the digital design techniques which have become increasingly important organized into 14 chapters this edition begins with an overview of the essential laws of boolean algebra k map plotting techniques as well as the simplification of boolean functions this text then presents the properties and develops the characteristic equations of a number of various types of flip flop other chapters consider the design of synchronous and asynchronous counters using either discrete flip flops or shift registers this book discusses as well the design and implementation of event driven logic circuits using the nand sequential equation the final chapter deals with simple coding techniques and the principles of error detection and correction this book is a valuable resource for undergraduate students digital engineers and scientists

Digital Design Techniques and Exercises

2021-12-09

this book describes digital design techniques with exercises the concepts and exercises discussed are useful to design digital logic from a set of given specifications looking at current trends of miniaturization the contents provide practical information on the issues in digital design and various design optimization and performance improvement techniques at logic level the book explains how to design using digital logic elements and how to improve design performance the book also covers data and control path design strategies architecture design strategies multiple clock domain design and exercises low power design strategies and solutions at the architecture and logic design level the book covers 60 exercises with solutions and will be useful to engineers during the architecture and logic design phase the contents of this book prove useful to hardware engineers logic design engineers students professionals and hobbyists looking to learn and use the digital design techniques during various phases of design

Digital Logic Design

2012-10-08

this textbook based on the authors fifteen years of teaching is a complete teaching tool for turning students into logic designers in one semester each chapter describes new concepts giving extensive applications and examples assuming no prior knowledge of discrete mathematics the authors introduce all background in propositional logic asymptotics graphs hardware and electronics important features of the presentation are all material is presented in full detail every designed circuit is formally specified and implemented the correctness of the implementation is proved and the cost and delay are analyzed algorithmic solutions are offered for logical simulation computation of propagation delay and minimum clock period connections are drawn from the physical analog world to the digital abstraction the language of graphs is used to describe formulas and circuits hundreds of figures examples and exercises enhance understanding the extensive website eng tau ac il guy even medina includes teaching slides links to logisim and a dlx assembly simulator

Digital Logic Design

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

Logic Design of Digital Systems

1978

textbook

Introduction to Digital Logic Design

1993

description the book is an attempt to make digital logic design easy and simple to understand the book covers various features of logic design using lots of examples and relevant diagrams the complete text is reviewed for its correctness this book is an outcome of sincere effort and hard work to bring concepts of digital logic design close to the audience of this book the salient features of the book easy explanation of digital system and binary numbers with lots of solved examples detailed covering of boolean algebra and gate level minimization with proper examples and diagrammatic representation detailed analysis of different combinational logic circuits complete synchronous sequential logic understanding deep understanding of memory and programmable logic detailed analysis of different asynchronous sequential logictable of contents unit 1 digital system and binary numbers part 1 digital system and binary numberspart 2 boolean algebra and gate level minimizationunit 2 combinational logicunit 3 sequential circuitsunit 4 memory programmable logic and designunit 5 asynchronous sequential logic

DIGITAL LOGIC DESIGN

2018-06-01

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

Digital Principles and Logic Design

2009-01-28

principles of modern digital design from underlying principles to implementation a thorough introduction to digital logic design with this book readers discover the connection between logic design principles and theory and the logic design and optimization techniques used in practice therefore they not only learn how to implement current design techniques but also how these techniques were developed and why they work with a deeper understanding of the underlying principles readers become better problem solvers when faced with new and difficult digital design challenges principles of modern digital design begins with an examination of number systems and binary code followed by the fundamental concepts of digital logic next readers advance to combinational logic design armed with this foundation they are then introduced to vhdl a powerful language used to describe the function of digital circuits and systems all the major topics needed for a thorough understanding of modern digital design are presented including fundamentals of synchronous sequential circuits and synchronous sequential circuit design combinational logic design using vhdl counter design sequential circuit design using vhdl asynchronous sequential circuits vhdl based logic design examples are provided throughout the book to illustrate both the underlying principles and practical design applications each chapter is followed by exercises that enable readers to put their skills into practice by solving realistic digital design problems an accompanying website with quartus ii software enables readers to replicate the book s examples and perform the exercises this book can be used for either a two or one semester course for undergraduate students in electrical and computer engineering and computer science its thorough explanation of theory coupled with examples and exercises enables both students and practitioners to master and implement modern digital design techniques with confidence

Digital Logic and Computer Design

1979

designed as a textbook for undergraduate students in electrical engineering electronics computer science and information technology this up to date well organized study gives an exhaustive treatment of the basic principles of digital electronics and logic design it aims at bridging the gap between these two subjects the many years of teaching undergraduate and postgraduate students of engineering that professor somanathan nair has done is reflected in the in depth analysis and student friendly approach of this book concepts are illustrated with the help of a large number of diagrams so that students can comprehend the subject with ease worked out examples within the text illustrate the concepts discussed and questions at the end of each chapter drill the students in self study

Digital Logic Design Principles

2001

an excellent introduction to the digital world in engineering introduction to digital logic design explains the simple concepts behind digital logic design from logic gates all the way to the design of sequential machines over the course of the eight chapters of the book students explore number systems and codes simple logic states boolean algebra working with logic equations and simplifying logic functions they also work with arithmetic in binary systems common combinational logic functions counters and sequential logic each chapter includes practical problems that allow for immediate application of the skills and concepts all material is based on extensive class testing simple yet rigorous introduction to digital logic design helps first semester

students see the big picture in logic design and doesn t overwhelm them with extraneous details the text is suitable for first year engineering computer science and information science courses rajiv kapadia earned his ph d at the university of oklahoma dr kapadia is an associate professor of electrical and computer engineering and technology at minnesota state university mankato

Digital Logic Design

1988

logic design of digital devices is a very important part of the computer science it deals with design and testing of logic circuits for both data path and control unit of a digital system design methods depend strongly on logic elements using for implementation of logic circuits different programmable logic devices are wide used for implementation of logic circuits nowadays we witness the rapid growth of new and new chips but there is a strong lack of new design methods this book includes a variety of design and test methods targeted on different digital devices it covers methods of digital system design the development of theoretical base for construction and designing of the pld based devices application of uml for digital design a considerable part of the book is devoted to design methods oriented on implementing control units using fpga and cpld chips such important issues as design of reliable fsms automatic design of concurrent logic controllers the models and methods for creating infrastructure ip services for the socs are also presented the editors of the book hope that it will be interesting and useful for experts in computer science and electronics as well as for students who are viewed as designers of future digital devices and systems

Principles of Modern Digital Design

2007-07-16

this text presents the essentials of modern logic design the author conveys key concepts in a clear informal manner demonstrating theory through numerous examples to establish a theoretical basis for practical applications all major topics including pld based digital design are covered and detailed coverage of digital logic circuit testing methods critical to successful chip manufacturing are included the industry standard pld programming language abel is fully integrated where appropriate the work also includes coverage of test generation techniques and design methods for testability a complete discussion of pld programmable logic device based digital design and coverage of state assignment and minimization explained using computer aided techniques

DIGITAL ELECTRONICS AND LOGIC DESIGN

2002-01-01

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

Electrical and Computer Engineering

2015-06-19

number systems base r arithmetic boolean algebra special boolean functions and basic logic conventions minimization procedures for boolean function binary arithmetic units decimal arithmetic introduction to sequential circuit design practical flip flop circuits binary counters register design techniques advanced arithmetic units

Digital Circuits and Logic Design

1976

digital logic offers the right balance of classical and up to date treatment of combinational and sequential logic design for a first digital logic design class the author provides a thorough explanation of the design process including completely worked examples beginning with simple examples and going on to problems of increasing complexity this text contains pld programmable logic design coverage chapter 9 develops complete worked eprom pla and epld design examples the problems are developed in chapter 7 as standard designs using ssi and msi devices so that your students can see the difference between the two approaches

Design of Digital Systems and Devices

2011-02-04

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

Practical Digital Logic Design and Testing

1996

this book is designed to serve as a hands on professional reference with additional utility as a textbook for upper undergraduate and some graduate courses in digital logic design this book is organized in such a way that that it can describe a number of rtl design scenarios from simple to complex the book constructs the logic design story from the fundamentals of logic design to advanced rtl design concepts keeping in view the importance of miniaturization today the book gives practical information on the issues with asic rtl design and how to overcome these concerns it clearly explains how to write an efficient rtl code and how to improve design performance the book also describes advanced rtl design concepts such as low power design multiple clock domain design and soc based design the practical orientation of the

book makes it ideal for training programs for practicing design engineers and for short term vocational programs the contents of the book will also make it a useful read for students and hobbyists

Foundation of Digital Electronics and Logic Design

2014-12-10

this textbook is intended to serve as a practical guide for the design of complex digital logic circuits such as digital control circuits network interface circuits pipelined arithmetic units and risc microprocessors it is an advanced digital logic design textbook that emphasizes the use of synthesizable vhdl code and provides numerous fully worked out practical design examples including a universal serial bus interface a pipelined multiply accumulate unit and a pipelined microprocessor for the arm thumb architecture

Digital Logic Design

2015-01-01

digital logic design is a comprehensive textbook which aims to provide entrylevelreaders a quick start to the field of digital logic design so as to facilitate themwith the capability suitable for the versatility of social change and interdisciplinarylearning this textbook can be used as a textbook for classroom use in the fields ofelectronics electrical computer science information engineering mechanical and soon the salient features of this textbook are as follows 1 introduce incrementally the principles of digital logic design and exemplify eachbasic theme and concept with abundant illustrations 2 detail design principles of various combinational modules including decoders encoders multiplexers demultiplexers arithmetic circuits and so on 3 introduce design principles of various sequential modules including counters registers shift registers sequence generators etc 4 address the structures features and applications of pld fpga devices 5 exemplify applications of cpld fpga devices with verilog hdl modules 6 provide 20 basic and application experiments of digital logic to help readers verifythe consistence of digital logic between principles and practice 7 include an abundance of review questions in each section to help readers evaluatetheir understandings about the section 8 deal with verilog hdl concisely in relevant sections so as to make the readerunderstand how to describe a logic circuit in verilog hdl precisely digital logic design is an ideal textbook for the digital logic design course in thefields of electronics electrical computer science information engineering mechanical etc or serves as a valuable reference book for self study

Digital Logic Design

1985

this text demonstrates state of the art technologies for the design of modern logic circuits including cad tools rapid prototyping and programmable logic devices it provides practice in traditional techniques of logic design and includes examples of implementations from many cad tools

A Systematic Approach to Digital Logic Design

1976

cd rom contains silos iii verilog desgn environment and simulator kilinx integrated synthesis environment ise synthesis tool for fpgas

A Systematic Approach to Digital Logic Design

1976

the third edition of digital logic techniques provides a clear and comprehensive treatment of the representation of data operations on data combinational logic design sequential logic computer architecture and practical digital circuits a wealth of exercises and worked examples in each chapter give students valuable experience in applying the concepts and techniques discussed beginning with an objective comparison between analogue and digital representation of data the author presents the boolean algebra framework for digital electronics develops combinational logic design from first principles and presents cellular logic as an alternative structure more relevant than canonical forms to vlsi implementation he then addresses sequential logic design and develops a strategy for designing finite state machines giving students a solid foundation for more advanced studies in automata theory the second half of the book focuses on the digital system as an entity here the author examines the implementation of logic systems in programmable hardware outlines the specification of a system explores arithmetic processors and elucidates fault diagnosis the final chapter examines the electrical properties of logic components compares the different logic families and highlights the problems that can arise in constructing practical hardware systems

Digital Logic

1997

digital logic

Introduction to Logic Circuits & Logic Design with Verilog

2017-04-17

cd rom contains silos iii verilog desgn environment and simulator kilinx integrated synthesis environment ise synthesis tool for fpgas

Digital Logic Design Using Verilog

2016-05-17

logic design of digital devices is a very important part of the computer science it deals with design and testing of logic circuits for both data path and control unit of a digital system design methods depend strongly on logic elements using for implementation of logic circuits different programmable logic devices are wide used for implementation of logic circuits nowadays we witness the rapid growth of new and new chips but there is a strong lack of new design methods this book includes a variety of design and test methods targeted on different digital devices it covers methods of digital system design the development of theoretical base for construction and designing of the pld based devices application of uml for digital design a considerable part of the book is devoted to design methods oriented on implementing control units using fpga and cpld chips such important issues as design of

reliable fsms automatic design of concurrent logic controllers the models and methods for creating infrastructure ip services for the socs are also presented the editors of the book hope that it will be interesting and useful for experts in computer science and electronics as well as for students who are viewed as designers of future digital devices and systems

Advanced Digital Logic Design

2006

digital logic design a complete overciew for engineering bca abd bsc computer courses bca semester engineering semester bsc computer semester

Digital Logic Design

2021-01-11

Contemporary Logic Design

1994

Advanced Digital Design with the Verilog HDL

2003

Fundamentals of Digital Logic with Verilog Design

2014

Digital Logic Techniques

2017-11-22

Digital Logic

2019-09-11

Advanced Digital Design with the Verilog HDL

2003

Logic and System Design of Digital Systems

2008

Foundations of Digital Logic Design

1998

Design of Digital Systems and Devices

2011-03-23

Digital Logic: Applications And Design

2008

Digital Principles and Logic Design

1988

Solutions manual

2023-06-11

Digital Logic Design- A Complete Overciew