

Digital Computer A P Malvino

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The Publishers' Trade List Annual John Wiley & Sons

Digital protection is based on the use of computers in power line relaying. This book gives a detailed understanding of the principles and techniques underlying the application of digital technology and algorithms to protection.

AN INTRODUCTION TO DIGITAL COMPUTER DESIGN McGraw-Hill Education

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

Computing Fundamentals and Programming in C Mit Press

In *Digital Places*, Tom Horan argues that cities can be both "wired" and livable and that electronic technology can be used to create gratifying digital places that will attract both people and businesses.

Molecular Logic-based Computation Royal Society of Chemistry

Introduces students to microprocessor fundamentals. The text relates the fundamentals to three real-world examples: Intel's 8085, Motorola's 6800, and the 6502 chip used by Apple Computers. This edition includes a student version of the TASM cross-assembler software program, experiments for Digital Computer Electronics and more.

Digital Places Tata McGraw-Hill Education

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 * 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!

Computer Fundamentals Springer Science & Business Media

Electronic Tubes|Semiconductor Devices|Diode Circuits|Amplifier Circuits|Oscillator Circuits|Thyristor Circuits|IC And Operational Amplifiers|Logic Circuits And Number Systems|Electrical Instruments|Electronic Instruments|Transducers|Appendices(A) Obj

Digital Computer Electronics Gregg Division McGraw-Hill

Digital Computer Structure and Design, Second Edition discusses switching theory, counters, sequential circuits, number representation, and arithmetic functions The book also describes computer memories, the processor, data flow system of the processor, the processor control system, and the input-output system. Switching theory, which is purely a mathematical concept, centers on the properties of interconnected networks of "gates." The theory deals with binary functions of 1 and 0 which can change instantaneously from one to the other without intermediate values. The binary number system is used in computer arithmetic and other operations due to its simplicity that can be easily adopted in device parameters. These operations involve only two levels: the "on" or "off" positions, which also offer maximum immunity to noise or circuit interference. The binary system is a very efficient way to represent numbers or to store data. When the computer uses this system, the clock cycle of the processor determines or divides the cycles for each sub-operation into steps. A master timing counter defines each of these steps, and synchronizes them avoid data loss or mix-ups. After the sub-operation has been completed, the monitor will display the result. Programmers, computer engineers, computer instructors, and students of computer science will find the book highly useful.

Functional Metallosupramolecular Materials KHANNA PUBLISHING HOUSE

This highly acclaimed, well established, book now in its fifth edition, is intended for an introductory course in digital computer design for B.Sc. students of computer science, B.Tech. students of computer science and engineering, and BCA/MCA students of computer applications. A knowledge of programming in C or Java would be useful to give the student a proper perspective to appreciate the development of the subject. The first part of the book presents the basic tools and develops procedures suitable for the design of digital circuits and small digital systems. It equips students with a firm understanding of logic principles before they study the intricacies of logic organization and architecture of computers in the second part. Besides discussing data representation, arithmetic operations, Boolean algebra and its application in designing combinatorial and sequential switching circuits, the book introduces the Algorithmic State Machines which are used to develop a hardware description language for the design of digital systems. The organization of a small hypothetical computer is described to illustrate how instruction sets are evolved. Real computers (namely, Pentium and MIPS machines) are described and compared with the hypothetical computer. After discussing the features of a CPU, I/O devices and I/O organization, cache and virtual memory, the

book concludes with a new chapter on the use of parallelism to enhance the speed of computers.

Besides, the fifth edition has new material in CMOS gates, MSI/ALU and Pentium5 architecture. The chapter on Cache and Virtual Memory has been rewritten.

Transistor Circuit Approximations John Wiley & Sons

This title gives students an integrated and rigorous picture of applied computer science, as it comes to play in the construction of a simple yet powerful computer system.

Digital Principles and Applications IET

There is great interest in metallosupramolecular materials because of their use in magnetic, photonic and electronic materials. Functional Metallosupramolecular Materials focuses on the applications of these materials covering the chemistry underlying the synthesis of a variety of ligands to coordinate various metal ions and the generation of 2D and 3D materials based on these constructs. The book starts by looking at different metallosupramolecular systems including naturally occurring functional metallosupramolecular materials; DNA-based metallosupramolecular materials; metallopolymers; metallogels as well as functional materials based on MOFs. Subsequent chapters then systematically cover the different applications such as molecular computation, spin-crossover, light harvesting and as photocatalysts for the production of solar fuels. The book provides an overview of functional metallosupramolecular materials that will be of interest to graduate students, academics and industrial chemists interested in supramolecular chemistry, materials science and the materials applications.

Digital Electronics and Laboratory Computer Experiments Springer Science & Business Media

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.

DNA- and RNA-Based Computing Systems Copyright Office, Library of Congress

Discover the science of biocomputing with this comprehensive and forward-looking new resource DNA- and RNA-Based Computing Systems delivers an authoritative overview of DNA- and RNA-based biocomputing systems that touches on cutting-edge advancements in computer science, biotechnology, nanotechnology, and materials science. Accomplished researcher, academic, and author Evgeny Katz offers readers an examination of the intersection of computational, chemical, materials, and engineering aspects of biomolecular information processing. A perfect companion to the recently published Enzyme-Based Computing by the same editor, the book is an authoritative reference for those who hope to better understand DNA- and RNA-based logic gates, multi-component logic networks, combinatorial calculators, and related computational systems that have recently been developed for use in biocomputing devices. DNA- and RNA-Based Computing Systems summarizes the latest research efforts in this rapidly evolving field and points to possible future research foci. Along with an examination of potential applications in biosensing and bioactuation, particularly in the field of biomedicine, the book also includes topics like: A thorough introduction to the fields of DNA and RNA computing, including DNA/enzyme circuits A description of DNA logic gates, switches and circuits, and how to program them An introduction to photonic logic using DNA and RNA The development and applications of DNA computing for use in databases and robotics Perfect for biochemists, biotechnologists, materials scientists, and bioengineers, DNA- and RNA-Based Computing Systems also belongs on the bookshelves of computer technologists and electrical engineers who seek to improve their understanding of biomolecular information processing. Senior undergraduate students and graduate students in biochemistry, materials science, and computer science will also benefit from this book.

Complete Digital Design: A Comprehensive Guide to Digital Electronics and Computer System Architecture McGraw Hill Professional

The complete spectrum of computing fundamentals starting from abc of computer to internet usage has been well covered in simple and readers loving style, The language used in the book is lucid, is easy to understand, and facilitates easy grasping of concepts, The chapter have been logically arranged in sequence, The book is written in a reader-friendly manner both the students and the teachers, Most of the contents presented in the book are in the form of bullets, organized sequentially. This form of presentation, rather than in a paragraph form, facilitates the reader to view, understand and remember the points better, The explanation is supported by diagrams, pictures and images wherever required, Sufficient exercises have been included for practice in addition to the solved examples in every chapter related to C programming, Concepts of pointers, structures, Union and file management have been extensively detailed to help advance learners, Adequate exercises have been given at the end of the every chapter, Pedagogy followed for sequencing the contents on C programming supported by adequate programming examples is likely to help the reader to become proficient very soon, 200 problems on C programming & their solutions, 250 Additional descriptive questions on C programming.

Digital Computer Structure and Design McGraw-Hill Companies

We all learn - in schools, factories, bars and streets. We gather, store, process and transmit information in society. Molecular systems involved in our senses and within our brains allow all this to happen and molecular systems allow living things of all kinds to handle information for the purpose of survival and growth. Nevertheless, the vital link between molecules and computation was not generally appreciated until a few decades ago. Semiconductor-based information technology had penetrated society at many levels and the interest in maintaining momentum of this revolution led to the consideration of molecules, among others, as possible information handlers. Such an overlap between the recent engineering-oriented revolution with the ancient biology-oriented success story is very interesting and George Boole's times in Ireland 150 years ago produced the logic ideas that provide the foundations of computation to this day. Molecular logic and computation is a field which is 17 years young, has had a healthy growth and is a story which deserves to be told. It is a growing branch of chemical science which highlights the connection between information technology (engineering and biological) and chemistry. The author and co-workers of this publication

launched molecular logic as an experimental field by publishing the first research in the primary literature in 1993 and are uniquely placed to recount how the field has grown. There is no other book at present on molecular logic and computation and is more comprehensive than that found in any review available so far. It shows how designed molecules can play the role of information processors in a wide variety of situations, once we are educated by those information processors already available in the semiconductor electronics business and in the natural world. Following a short history of the field, is a set of primers on logic, computing and photochemical principles which are an essential basis in this field. The book covers all of the Boolean logic gates driven by a single input and all of those with double inputs and the wide range of designs which lie beneath these gates is a particular highlight. The easily-available diversity of chemical systems is another highlight, especially when it leads to reconfigurable logic gates. Further on in the book, molecular arithmetic and other more complex logic operations, including those with a memory and those which stray beyond binary are covered. Then follows molecular computing approaches which lie outside the Boolean blueprint, including quantum phenomena and finally, the book catalogues the useful real-life applications of molecular logic and computation which are already available. This book is an authoritative, state of the art, reference and a 'one-stop-shop' concerning the current state of the field for scientists, academics and postgraduate students.

Digital Electronics Tata McGraw-Hill Education

"Electronic Principles, eighth edition, continues its tradition as a clearly explained, in-depth introduction to electronic semiconductor devices and circuits. This textbook is intended for students who are taking their first course in linear electronics. The prerequisites are a dc/ac circuits course, algebra, and some trigonometry. Electronic Principles provides essential understanding of semiconductor device characteristics, testing, and the practical circuits in which they are found. The text provides clearly explained concepts-written in an easy-to-read conversational style-establishing the foundation needed to understand the operation and troubleshooting of electronic systems. Practical circuit examples, applications, and troubleshooting exercises are found throughout the chapters"--

The Elements of Computing Systems McGraw-Hill Companies

The current cutting-edge VLSI circuit design technologies provide end-users with many applications, increased processing power and improved cost effectiveness. This trend is accelerating, with significant implications on future VLSI and systems design. VLSI design engineers are always in demand for front-end and back-end design applications. The book aims to give future and current VLSI design engineers a robust understanding of the underlying principles of the subject. It not only focuses on circuit design processes obeying VLSI rules but also on technological aspects of fabrication. The Hardware Description Language (HDL) Verilog is explained along with its modelling style. The book also covers CMOS design from the digital systems level to the circuit level. The book clearly explains fundamental principles and is a guide to good design practices. The book is intended as a reference book for senior undergraduate, first-year post graduate students, researchers as well as academicians in VLSI design, electronics & electrical engineering and materials science. The basics and applications of VLSI design from digital system design to IC fabrication and FPGA Prototyping are each covered in a comprehensive manner. At the end of each unit is a section with technical questions including solutions which will serve as an excellent teaching aid to all readers. Technical topics discussed in the book include: • Digital System Design • Design flow for IC fabrication and FPGA based prototyping • Verilog HDL • IC Fabrication Technology • CMOS VLSI

Design • Miscellaneous (It covers basics of Electronics, and Reconfigurable computing, PLDs, Latest technology etc.).

Digital Logic Design McGraw-Hill Companies

Reviews in Fluorescence 2004, the first book of a new book series from Springer, is a collection of current trends and emerging hot topics in the field of Fluorescence. This annual review series differs from Springer's current Topics in Fluorescence series in that it is more specialized and includes reviews of an individual's own work or scientific perspective. Reviews in Fluorescence will therefore complement the other fluorescence titles published by Springer, whilst feeding the requirement from the fluorescence community for annual informative updates and developments. Key features: - Reviews in Fluorescence will be citable, indexed, and available both in print and online. - Reviews in Fluorescence will be published annually. - Reviews in Fluorescence will comprise invited review articles that summarize the yearly progress in fluorescence. - Alternate years will publish the Invited Papers from the Methods and Applications in Fluorescence conference series (MAFS).

Digital Computer Electronics McGraw-Hill Science, Engineering & Mathematics

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, de-multiplexers, 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 Computer Primer CRC Press

This is often considered the first book on computer programming. It was written for the EDSAC (Electronic Delay Storage Automatic Calculator) computer that began operation in 1949 as the world's first regularly operated stored program computer. The idea of a library of subroutines was developed for the EDSAC, and is described in this book. Maurice Wilkes lead the development of the EDSAC.

Electronic Principles Urban Land Institute

Designed for use in courses such as electronic devices or electronic circuits, this text features a new chapter on communication circuits, as well as performance objectives for each chapter. New material provides a stronger theoretical understanding of electronics. In addition, special sections called T-shooters, designed to strengthen students' trouble-shooting skills, are included throughout the text. The content of the work has also been updated to keep coverage in step with the fast-changing world of electronics.