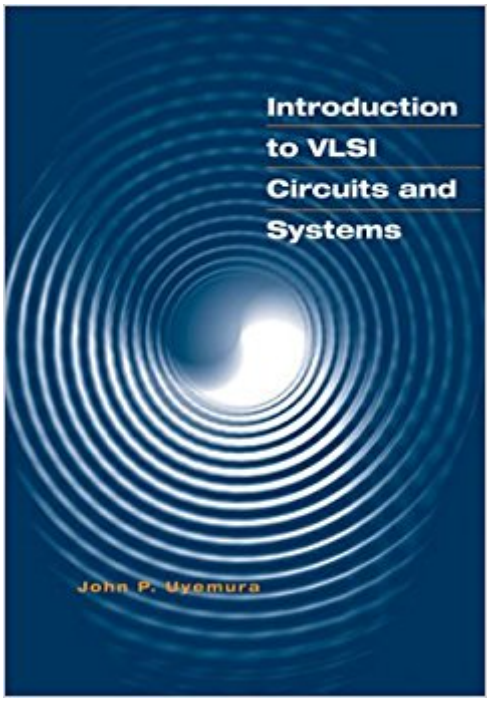
Introduction To VLSI Circuits And Systems



Synopsis

Presents modern CMOS logic circuits, fabrication, and layout in a cohesive manner that links the material together with the system-level considerations. * Chapter on Verilog HDL allows for rapid start-up. * Illustrates the top-down design procedure used in modern VLSI chip design with an emphasis on variations in the HDL, logic, circuits and layout.

Book Information

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Customer Reviews

A Complete and accessible introduction to modern digital VLSI design Clearly Written for both classroom use and self-stuwritten and drawings, John. Uyemura’s comprehensive introduction to modern VLSI design makes the subject accessible to students and professionals from a broad range of backgrounds, such s electrical engineering, computer engineering, and computer science. The text presents CMOS logic circuits, fabrication, and layout in a cohesive manner that links the material together with the system-level considerations. Throughout, the text emphasizes the top-down design procedure used to engineer complex VLSI chips, which enables readers to see the tradeoffs that occur at all levels of the design hierarchy. You’ll learn how to compare different solutions to a CMOS logic implementation problem, and how the choices affect the overall outcome. Features Presents a comprehensive treatment of modern VLSI design. An accompanying CD-ROM containing student versions of VerilogÂ® and SPICE simulators that can be run on a WindowsÂ® PC operating system. Includes an easy-to-read, self-contained chapter on VerilogÂ® HDL. Many examples address system-level considerations. Numerous problems throughout the text illustrate

key concepts. Demonstrates the interaction of system-level design with lower-level considerations of switching speed and silicon real estate. Covers the design of high-speed CMOS logic circuits.

If you want to jump into VLSI and get VERY far in one semester, this book is great. You will need Cadence and I also recommend as a challenge to yourself constructing your own 8-bit, 8 world ALU with 3 control bits and 8 opearationsA+BA-BA--A++A nand BA xor BA'A nor BIt will be a good learning experience, specially if you try to optimize it and add a barrel shiftter with a 2 clock operation cycle.

seems like pretty complicated stuff until John here breaks it down for you.wonderfully organized and clearly explained. every page is relevant to my course and easy to read.

Almost new, pretty good.

well

I am an EE PhD student in my first year and have to design a mixed analog/digital chip. This book is one of the best technical books I have ever read. Well structured, thorough but does not give you so much detail that you risk drowning. This book actually is fun to read.

Currently using this book for a class in VLSI design. Book is well written and easy to read. Stress fundamentals and design concepts. Highly recommended!

This book is very well written and easy to understand. The author did an excellent job organizing the topics and explaining the key points thoroughly.

of Electronic Testing for Digital, Memory and Mixed-Signal VLSI Circuits (Frontiers in Electronic Testing) PSPICE and MATLAB for Electronics: An Integrated Approach (VLSI Circuits) PSPICE and MATLAB for Electronics: An Integrated Approach, Second Edition (VLSI Circuits) Nanoscale CMOS VLSI Circuits: Design for Manufacturability Vlsi Analog Signal Processing Circuits VLSI High-Speed I/O Circuits Introduction to VLSI Systems: A Logic, Circuit, and System Perspective Introduction to VLSI Systems CMOS Digital Integrated Circuits: A First Course (Materials, Circuits and Devices) An Introduction to Systems Biology: Design Principles of Biological Circuits (Chapman & Hall/CRC Mathematical and Computational Biology) VLSI Digital Signal Processing Systems: Design and Implementation VLSI Test Principles and Architectures: Design for Testability (The Morgan Kaufmann Series in Systems on Silicon)