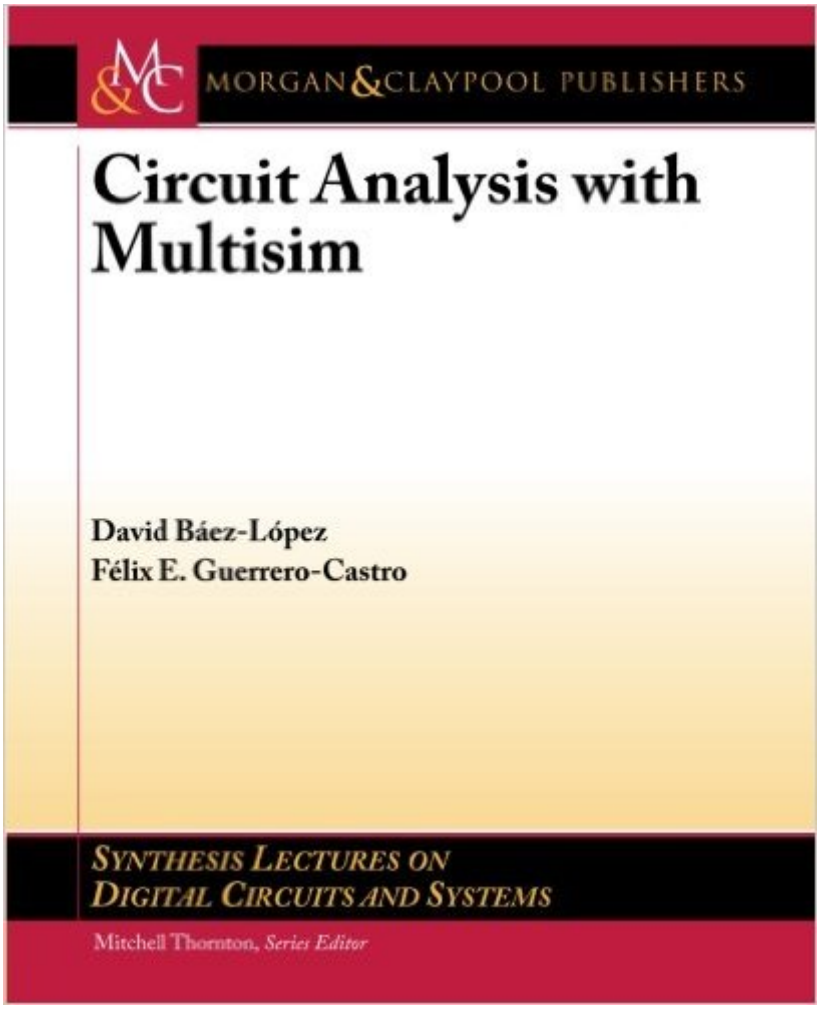
Circuit Analysis With Multisim (Synthesis Lectures On Digital Circuits And Systems)



Synopsis

This book is concerned with circuit simulation using National Instruments Multisim. It focuses on the use and comprehension of the working techniques for electrical and electronic circuit simulation. The first chapters are devoted to basic circuit analysis. It starts by describing in detail how to perform a DC analysis using only resistors and independent and controlled sources. Then, it introduces capacitors and inductors to make a transient analysis. In the case of transient analysis, it is possible to have an initial condition either in the capacitor voltage or in the inductor current, or both. Fourier analysis is discussed in the context of transient analysis. Next, we make a treatment of AC analysis to simulate the frequency response of a circuit. Then, we introduce diodes, transistors, and circuits composed by them and perform DC, transient, and AC analyses. The book ends with simulation of digital circuits. A practical approach is followed through the chapters, using step-by-step examples to introduce new Multisim circuit elements, tools, analyses, and virtual instruments for measurement. The examples are clearly commented and illustrated. The different tools available on Multisim are used when appropriate so readers learn which analyses are available to them. This is part of the learning outcomes that should result after each set of end-of-chapter exercises is worked out. Table of Contents: Introduction to Circuit Simulation / Resistive Circuits / Time Domain Analysis -- Transient Analysis / Frequency Domain Analysis -- AC Analysis / Semiconductor Devices / Digital Circuits

Book Information

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Customer Reviews

I only wish the book could be more technical, but it does help on how to set various analysis techniques.

Waste of my money. Blurry pictures/text and not at all what I expected as a reference.

great resource - I wish I had this book before my first few electronics classes in which we started using Multisim

Circuit Analysis with Multisim (Synthesis Lectures on Digital Circuits and Systems) Introduction to Embedded Systems: Using ANSI C and the Arduino Development Environment (Synthesis Lectures on Digital Circuits and Systems) Winter Circuit (Show Circuit Series -- Book 2) (The Show Circuit) Circuit Engineering: The Beginner's Guide to Electronic Circuits, Semi-Conductors, Circuit Boards, and Basic Electronics Electronic Circuits: The Definitive Guide to Circuit Boards, Testing Circuits and Electricity Principles Advances in 3D Integrated Circuits and Systems (Series on Emerging Technologies in Circuits and Systems) Design of 3D Integrated Circuits and Systems (Devices, Circuits, and Systems) Low-Voltage/Low-Power Integrated Circuits and Systems: Low-Voltage Mixed-Signal Circuits (IEEE Press Series on Microelectronic Systems) Principles of Transistor Circuits, Eighth Edition: Introduction and guide to the design of amplifiers, function generators, receivers and digital circuits Circuit: Engineering Concepts and Analysis of Linear Electric Circuits Electronics: Principles and Applications with MultiSIM CD-ROM Summer Circuit (Show Circuit Series -- Book 1) Designing Dynamic Circuit Response (Analog Circuit Design) 2015 Federal Circuit Yearbook: Patent Law Developments in the Federal Circuit VLSI Analog Signal Processing Circuits: Algorithm, Architecture, Modeling, and Circuit Implementation Analysis and Design of Digital Integrated Circuits CMOS Digital Integrated Circuits Analysis & Design The Government of Self and Others: Lectures at the College de France, 1982-1983 (Lectures at the CollÃ¨ge de France) Lectures on Antitrust Economics (Cairoli Lectures) The Birth of Biopolitics: Lectures at the College de France, 1978-1979 (Lectures at the CollÃ¨ge de France)