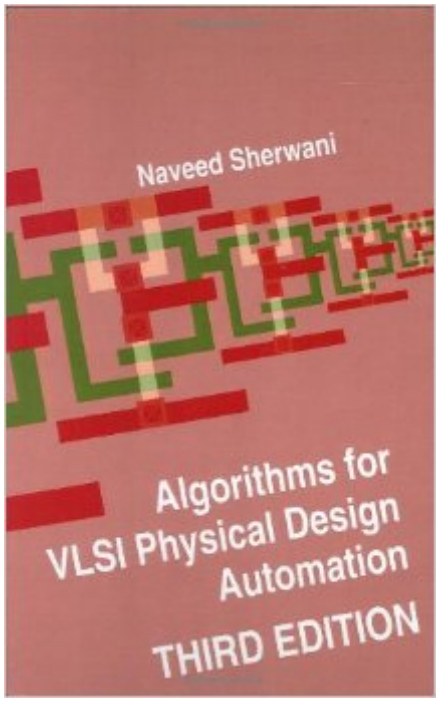
Algorithms For VLSI Physical Design Automation



Synopsis

Algorithms for VLSI Physical Design Automation, Third Edition covers all aspects of physical design. The book is a core reference for graduate students and CAD professionals. For students, concepts and algorithms are presented in an intuitive manner. For CAD professionals, the material presents a balance of theory and practice. An extensive bibliography is provided which is useful for finding advanced material on a topic. At the end of each chapter, exercises are provided, which range in complexity from simple to research level. Algorithms for VLSI Physical Design Automation, Third Edition provides a comprehensive background in the principles and algorithms of VLSI physical design. The goal of this book is to serve as a basis for the development of introductory-level graduate courses in VLSI physical design automation. It provides self-contained material for teaching and learning algorithms of physical design. All algorithms which are considered basic have been included, and are presented in an intuitive manner. Yet, at the same time, enough detail is provided so that readers can actually implement the algorithms given in the text and use them. The first three chapters provide the background material, while the focus of each chapter of the rest of the book is on each phase of the physical design cycle. In addition, newer topics such as physical design automation of FPGAs and MCMs have been included. The basic purpose of the third edition is to investigate the new challenges presented by interconnect and process innovations. In 1995 when the second edition of this book was prepared, a six-layer process and 15 million transistor microprocessors were in advanced stages of design. In 1998, six metal process and 20 million transistor designs are in production. Two new chapters have been added and new material has been included in almost allother chapters. A new chapter on process innovation and its impact on physical design has been added. Another focus of the third edition is to promote use of the Internet as a resource, so wherever possible URLs have been provided for further investigation. Algorithms for VLSI Physical Design Automation, Third Edition is an important core reference work for professionals as well as an advanced level textbook for students.

Book Information

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Customer Reviews

This book is good at introducing basic concepts, if this is whatyou want to know. But it is really bad to introduce algorithm.It simply confuse you. Many time I don’t know what the authoris talking about and have to find the original paper, which ismuch clear.

I read the Chapter on clock routing and found that theauthor did not do a good job on explaining about DMEalgorithm. I got more confused after reading it. So,I went to the library and checked the referenceswhich gave me clear understanding. Usually, a bookshoud give a reader with a very clear example aboutthe algorithm it presents. It’s was not the case forthe DME algorithm.

I found this book very helpful in gaining a deeper understanding of what the tools I use are doing. Also, the terminology that is used and explained allows me to easier communication with the CAD developers. I found the information relating to clock skew and jitter of particular value to my daily work.

Very comprehensive in VLSI physical design automation. People who major in Computer Science and want to study in VLSI is suitable to buy this book. Also people who want to develop EDA tools can buy the book.

I found this book very helpful when working on my dissertation. It provides a great overview of the algorithms and approaches used in VLSI CAD, many of which can be extended to the FPGA CAD work I was doing. Other reviewers have commented that they sometimes referred to the original papers cited. I too did that when I wanted more information, but still found this book to be great as a reference and starting point.

Home Automation System: A Practical Guide to on How to Use SmartThings Home Automation in Your Everyday Life. ... Home Automation Essential Guides Book 6) VLSI Physical Design Automation: Theory and Practice Algorithms: C++: Data Structures, Automation & Problem Solving, w/ Programming & Design (app design, app development, web development, web design, jquery, ... software engineering, r programming) Automation Made Easy: Everything You Wanted to Know about Automation--and Need to Ask Home Automation with the Raspberry Pi: Build Home Automation Systems Using The Power of The Raspberry Pi Apple's Homekit Smart Home Automation System Handbook: Discover How to Build Your Own Smart Home Using Apple's New HomeKit System (Smart Home Automation Essential Guides Book 7) Circuits, Interconnections, and Packaging for Vlsi (Addison-Wesley VLSI systems series) Java Programming Box Set: Programming, Master's Handbook & Artificial Intelligence Made Easy; Code, Data Science, Automation, problem solving, Data Structures & Algorithms (CodeWell Box Sets) Ruby Programming Box Set: Programming, Master's Handbook & Artificial Intelligence Made Easy; Code, Data Science, Automation, problem solving, Data Structures & Algorithms (CodeWell Box Sets) VLSI Physical Design: From Graph Partitioning to Timing Closure VLSI Chip Design with the Hardware Description Language VERILOG: An Introduction Based on a Large RISC Processor Design Algorithms in C, Parts 1-5 (Bundle): Fundamentals, Data Structures, Sorting, Searching, and Graph Algorithms (3rd Edition) Evolutionary Algorithms in Theory and Practice: Evolution Strategies, Evolutionary Programming, Genetic Algorithms Applied Cryptography: Protocols, Algorithms, and Source Code in C [APPLIED CRYPTOGRAPHY: PROTOCOLS, ALGORITHMS, AND SOURCE CODE IN C BY Schneier, Bruce (Author) Nov-01-1995 Practical Algorithms in Pediatric Hematology and Oncology: (Practical Algorithms in Pediatrics. Series Editor: Z. Hochberg) Combinatorial Optimization: Theory and Algorithms (Algorithms and Combinatorics) Geometric Algorithms and Combinatorial Optimization (Algorithms and Combinatorics) Digital VLSI Design with Verilog: A Textbook from Silicon Valley Polytechnic Institute VLSI Digital Signal Processing Systems: Design and Implementation