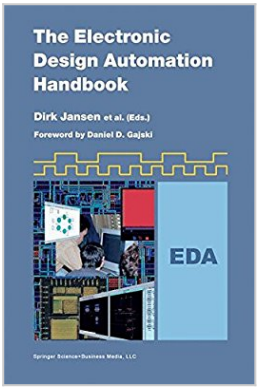

The Electronic Design Automation Handbook

From Springer

The Electronic Design Automation Handbook From Springer

When I attended college we studied vacuum tubes in our junior year. At that time an average radio had ?ve vacuum tubes and better ones even seven. Then transistors appeared in 1960s. A good radio was judged to be one with more thententransistors. Latergoodradioshad15–20transistors and after that everyone stopped counting transistors. Today modern processors runing personal computers have over 10milliontransistorsandmoremillionswillbeaddedevery year. The difference between 20 and 20M is in complexity, methodology and business models. Designs with 20 tr- sistors are easily generated by design engineers without any tools, whilst designs with 20M transistors can not be done by humans in reasonable time without the help of Prof. Dr. Gajski demonstrates the Y-chart automation. This difference in complexity introduced a paradigm shift which required sophisticated methods and tools, and introduced design automation into design practice. By the decomposition of the design process into many tasks and abstraction levels the methodology of designing chips or systems has also evolved. Similarly, the business model has changed from vertical integration, in which one company did all the tasks from product speci?cation to manufacturing, to globally distributed, client server production in which most of the design and manufacturing tasks are outsourced.

The Electronic Design Automation Handbook

From Springer

The Electronic Design Automation Handbook From Springer

When I attended college we studied vacuum tubes in our junior year. At that time an average radio had ?ve vacuum tubes and better ones even seven. Then transistors appeared in 1960s. A good radio was judged to be one with more thententransistors. Latergoodradioshad15–20transistors and after that everyone stopped counting transistors. Today modern processors runing personal computers have over 10milliontransistorsandmoremillionswillbeaddedevery year. The difference between 20 and 20M is in complexity, methodology and business models. Designs with 20 tr- sistors are easily generated by design engineers without any tools, whilst designs with 20M transistors can not be done by humans in reasonable time without the help of Prof. Dr. Gajski demonstrates the Y-chart automation. This difference in complexity introduced a paradigm shift which required sophisticated methods and tools, and introduced design automation into design practice. By the decomposition of the design process into many tasks and abstraction levels the methodology of designing chips or systems has also evolved. Similarly, the business model has changed from vertical integration, in which one company did all the tasks from product speci?cation to manufacturing, to globally distributed, client server production in which most of the design and manufacturing tasks are outsourced.

The Electronic Design Automation Handbook From Springer Bibliography

- Published on: 2010-12-07
- Original language: English
- Number of items: 1
- Dimensions: 9.21" h x 1.36" w x 6.14" l, 2.05 pounds
- Binding: Paperback
- 655 pages

Editorial Review

Review

From the reviews:

"In such a changing environment this Handbook on Electronic Design Automation represents a welcome help for the practitioners of the system design as well as for students taking courses in the same area. The Handbook surveys the main tasks of system design methodology, explains different methods and tools for design specification, synthesis, simulation, and verification, introduces hardware description languages and modeling practices, and introduces techniques for the design of circuits, modules and systems on different levels of abstraction. The main advantage of this Handbook is that readers quickly obtain a good overview of the design methodologies and of the design automation field as a whole, instead of only one aspect of it. For this reason, I sincerely welcome this book and recommend it highly to all practitioners in the field of designing and building electronic systems."
(From the Foreword: Daniel D. Gajski)

"Since the environment is changing in the Electronic Design Automation (EDA) industry with amazing speed, this handbook on EDA represents an appreciated help for the practitioners in system design … . covers (at least) the minimum knowledge one must know today to design modern electronics with computer programs effectively. … The main advantage of this handbook is that readers may quickly obtain a good overview of the design automation field … . This is why this book is highly recommended … ." (Neculai Curteanu, Zentralblatt MATH, Vol. 1044 (19), 2004)

"The Electronic Design Automation Handbook by Dirk Jansen … endeavors to create a compendium that integrates basic knowledge from a variety of areas in EDA, providing a ‘one-stop shop’ that overviews the field. … the book has many aspects that provide good value to the reader. … it must be said that this book covers a great deal of ground, and makes a sincere effort in doing so. It’s a very good source for design and EDA practitioners, and students … ." (Sachin Sapatnekar, IEEE Design & Test of Computers, 2005)

Users Review

From reader reviews:

Joe Vizcarra:

Why don't make it to become your habit? Right now, try to ready your time to do the important action, like looking for your favorite e-book and reading a reserve. Beside you can solve your trouble; you can add your knowledge by the reserve entitled The Electronic Design Automation Handbook. Try to stumble through book The Electronic Design Automation Handbook as your buddy. It means that it can being your friend when you really feel alone and beside those of course make you smarter than ever. Yeah, it is very fortuned for yourself. The book makes you a lot more confidence because you can know almost everything by the book. So , let us make new experience and knowledge with this book.

Leah Pelton:

The book The Electronic Design Automation Handbook make you feel enjoy for your spare time. You can utilize to make your capable a lot more increase. Book can to become your best friend when you getting tension or having big problem using your subject. If you can make looking at a book The Electronic Design Automation Handbook for being your habit, you can get considerably more advantages, like add your personal capable, increase your knowledge about some or all subjects. You can know everything if you like open and read a guide The Electronic Design Automation Handbook. Kinds of book are several. It means that, science guide or encyclopedia or other people. So , how do you think about this reserve?

Mildred Lyons:

Reading can called brain hangout, why? Because when you find yourself reading a book specially book entitled The Electronic Design Automation Handbook your head will drift away trough every dimension, wandering in each and every aspect that maybe unknown for but surely might be your mind friends. Imaging each and every word written in a guide then become one application form conclusion and explanation that will maybe you never get previous to. The The Electronic Design Automation Handbook giving you an additional experience more than blown away your brain but also giving you useful facts for your better life with this era. So now let us show you the relaxing pattern the following is your body and mind are going to be pleased when you are finished reading it, like winning a casino game. Do you want to try this extraordinary paying spare time activity?

Sean Rusin:

Do you have something that you enjoy such as book? The reserve lovers usually prefer to opt for book like comic, brief story and the biggest you are novel. Now, why not striving The Electronic Design Automation Handbook that give your enjoyment preference will be satisfied by simply reading this book. Reading practice all over the world can be said as the opportunity for people to know world a great deal better then how they react in the direction of the world. It can't be stated constantly that reading addiction only for the geeky individual but for all of you who wants to end up being success person. So , for every you who want to start reading through as your good habit, you are able to pick The Electronic Design Automation Handbook become your current starter.

Read The Electronic Design Automation Handbook From Springer for online ebook

The Electronic Design Automation Handbook From Springer Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read The Electronic Design Automation Handbook From Springer books to read online.

Online The Electronic Design Automation Handbook From Springer ebook PDF download

The Electronic Design Automation Handbook From Springer Doc

The Electronic Design Automation Handbook From Springer Mobipocket

The Electronic Design Automation Handbook From Springer EPub