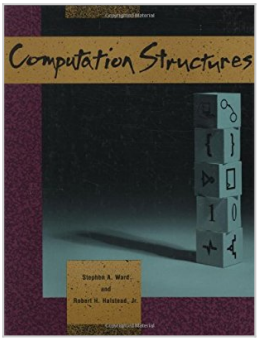

Computation Structures (MIT Electrical Engineering and Computer Science)

By Stephen Ward, Robert Halstead

Computation Structures (MIT Electrical Engineering and Computer Science) By Stephen Ward, Robert Halstead

Developed as the text for the basic computer architecture course at MIT, Computation Structures integrates a thorough coverage of digital logic design with a comprehensive presentation of computer architecture. It contains a wealth of information for those who design computers or work with computer systems, spanning the entire range of topics from analog circuit design to operating systems. Ward and Halstead seek to demystify the construction of computing hardware by illustrating systematically how it is built up from digital circuits through higher level components to processors and memories, and how its design is affected by its intended uses.Computation Structures is unusually broad in scope, considering many real world problems and tradeoff decisions faced by practicing engineers. These difficult choices are confronted and given careful attention throughout the book.Topics addressed include the digital abstraction; digital representations and notation; combinational devices and circuits; sequence and state; synthesis of digital systems; finite state machines; control structures and disciplines; performance measures and tradeoffs; communication; interpretation; microinterpreter architecture; microprogramming and microcode; single sequence machines; stack architectures; register architectures; reduced instruction set computers; memory architectures; processes and processor multiplexing; process synchronization; interrupts, priorities, and real time; directions and trends.Stephen A. Ward and Robert H. Halstead are both Associate Professors of Computer Science and Electrical Engineering at MIT. Computation Structures is included in the MIT Electrical Engineering and Computer Science series.

Computation Structures (MIT Electrical Engineering and Computer Science)

By Stephen Ward, Robert Halstead

Computation Structures (MIT Electrical Engineering and Computer Science) By Stephen Ward, Robert Halstead

Developed as the text for the basic computer architecture course at MIT, Computation Structures integrates a thorough coverage of digital logic design with a comprehensive presentation of computer architecture. It contains a wealth of information for those who design computers or work with computer systems, spanning the entire range of topics from analog circuit design to operating systems. Ward and Halstead seek to demystify the construction of computing hardware by illustrating systematically how it is built up from digital circuits through higher level components to processors and memories, and how its design is affected by its intended uses.Computation Structures is unusually broad in scope, considering many real world problems and tradeoff decisions faced by practicing engineers. These difficult choices are confronted and given careful attention throughout the book.Topics addressed include the digital abstraction; digital representations and notation; combinational devices and circuits; sequence and state; synthesis of digital systems; finite state machines; control structures and disciplines; performance measures and tradeoffs; communication; interpretation; microinterpreter architecture; microprogramming and microcode; single sequence machines; stack architectures; register architectures; reduced instruction set computers; memory architectures; processes and processor multiplexing; process synchronization; interrupts, priorities, and real time; directions and trends.Stephen A. Ward and Robert H. Halstead are both Associate Professors of Computer Science and Electrical Engineering at MIT. Computation Structures is included in the MIT Electrical Engineering and Computer Science series.

Computation Structures (MIT Electrical Engineering and Computer Science) By Stephen Ward, Robert Halstead Bibliography

- Sales Rank: #1567401 in Books
- Published on: 1989-12-13
- Original language: English
- Number of items: 1
- Dimensions: 10.10" h x 1.70" w x 8.30" l, 4.12 pounds
- Binding: Hardcover
- 811 pages

Editorial Review

Amazon.com Review
Computation Structures focuses on computer architecture as a complicated problem in digital design. As such, the initial sections discuss the basic principles of designing digital circuits and systems. The context is subsequently used to discuss more and more advanced ideas without a lot of confusing structure. For example, pipelining is initially discussed in terms of speeding up simple arithmetic circuits, which allows the reader to focus on the conceptual issues of pipelining rather than the embedded problem. Using this aggregative approach, the authors build their way up through a series of simple machines to begin talking about processes and process semantics. In addition, *Computation Structures* contains a nice section on microcode, which is seldom discussed in most books. The text is clear and the exercises well chosen.

Users Review

From reader reviews:

Annette Morrison:

In this 21st century, people become competitive in every way. By being competitive currently, people have do something to make these individuals survives, being in the middle of often the crowded place and notice by surrounding. One thing that occasionally many people have underestimated this for a while is reading. Yep, by reading a guide your ability to survive boost then having chance to stay than other is high. To suit your needs who want to start reading some sort of book, we give you this specific Computation Structures (MIT Electrical Engineering and Computer Science) book as nice and daily reading guide. Why, because this book is greater than just a book.

George Hinnenkamp:

This Computation Structures (MIT Electrical Engineering and Computer Science) is great publication for you because the content which is full of information for you who else always deal with world and still have to make decision every minute. That book reveal it data accurately using great coordinate word or we can claim no rambling sentences inside it. So if you are read it hurriedly you can have whole details in it. Doesn't mean it only provides straight forward sentences but hard core information with lovely delivering sentences. Having Computation Structures (MIT Electrical Engineering and Computer Science) in your hand like finding the world in your arm, details in it is not ridiculous 1. We can say that no reserve that offer you world in ten or fifteen tiny right but this book already do that. So , this is good reading book. Hello Mr. and Mrs. hectic do you still doubt that will?

Valerie Wright:

You can find this Computation Structures (MIT Electrical Engineering and Computer Science) by visit the bookstore or Mall. Merely viewing or reviewing it may to be your solve problem if you get difficulties on your knowledge. Kinds of this publication are various. Not only by written or printed but in addition can you

enjoy this book by simply e-book. In the modern era such as now, you just looking by your local mobile phone and searching what your problem. Right now, choose your current ways to get more information about your reserve. It is most important to arrange you to ultimately make your knowledge are still upgrade. Let's try to choose correct ways for you.

Sharon Hite:

A lot of people said that they feel fed up when they reading a book. They are directly felt the item when they get a half parts of the book. You can choose typically the book Computation Structures (MIT Electrical Engineering and Computer Science) to make your personal reading is interesting. Your personal skill of reading expertise is developing when you similar to reading. Try to choose simple book to make you enjoy to read it and mingle the feeling about book and reading especially. It is to be initially opinion for you to like to open up a book and examine it. Beside that the reserve Computation Structures (MIT Electrical Engineering and Computer Science) can to be your new friend when you're really feel alone and confuse in what must you're doing of their time.

Read Computation Structures (MIT Electrical Engineering and Computer Science) By Stephen Ward, Robert Halstead for online ebook

Computation Structures (MIT Electrical Engineering and Computer Science) By Stephen Ward, Robert Halstead 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 Computation Structures (MIT Electrical Engineering and Computer Science) By Stephen Ward, Robert Halstead books to read online.

Online Computation Structures (MIT Electrical Engineering and Computer Science) By Stephen Ward, Robert Halstead ebook PDF download

Computation Structures (MIT Electrical Engineering and Computer Science) By Stephen Ward, Robert Halstead Doc

Computation Structures (MIT Electrical Engineering and Computer Science) By Stephen Ward, Robert Halstead Mobipocket

Computation Structures (MIT Electrical Engineering and Computer Science) By Stephen Ward, Robert Halstead EPub

G4SKR2WOP7C: Computation Structures (MIT Electrical Engineering and Computer Science) By Stephen Ward, Robert Halstead