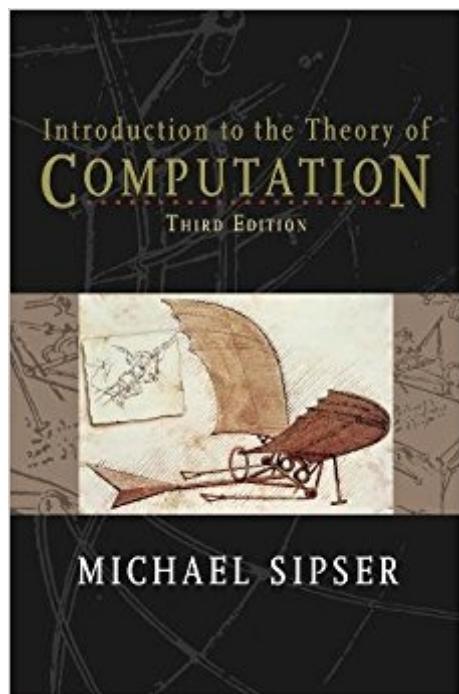


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# Introduction To The Theory Of Computation



## **Synopsis**

Gain a clear understanding of even the most complex, highly theoretical computational theory topics in the approachable presentation found only in the market-leading INTRODUCTION TO THE THEORY OF COMPUTATION, 3E. The number one choice for today's computational theory course, this revision continues the book's well-known, approachable style with timely revisions, additional practice, and more memorable examples in key areas. A new first-of-its-kind theoretical treatment of deterministic context-free languages is ideal for a better understanding of parsing and LR(k) grammars. You gain a solid understanding of the fundamental mathematical properties of computer hardware, software, and applications with a blend of practical and philosophical coverage and mathematical treatments, including advanced theorems and proofs. INTRODUCTION TO THE THEORY OF COMPUTATION, 3E's comprehensive coverage makes this a valuable reference for your continued studies in theoretical computing.

## **Book Information**

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## **Customer Reviews**

"The text meets my objectives very well. The author presents the material in an appealing manner, making a hard subject accessible and intuitive to the students. He manages to do that while maintaining the rigor and formalism that the subject warrants. The book has a lot of information packed in it, and can serve as a reference book for students interested in research in theoretical CS. As one of my students puts it, the book is 'fun to read and helps him learn the subject better'. This is a model for readability, with sensitivity for what students find difficult. Excellent prose (simple and succinct) with very good diagrams. It is by far the best presentation of automata

in the business."

Michael Sipser has taught theoretical computer science and mathematics at the Massachusetts Institute of Technology for the past 32 years. He is a Professor of Applied Mathematics, a member of the Computer Science and Artificial Intelligence Laboratory (CSAIL), and the current head of the mathematics department. He enjoys teaching and pondering the many mysteries of complexity theory.

This is a great intro to complexity theory, though expensive for my tastes. I bought it for an automata class, never read it during the class, but came back to it for the special topics. This only dips into the special topics, but introduces many of the important classes, and their relation to other complexity classes. Such classes as L, BPP, IP, Alternating, NC, and of course P, NP, EXPTIME, PSPACE, and more. It is very well written. It usually explains the proof ideas before starting, and gives detailed proofs. If you can afford it, this book makes a great intro to complexity theory. However, this is an intro. This book does not discuss advanced topics in depth, just enough to understand the most common complexity classes and their known relationships.

Sipser has a very nice intro to the subject of computation and complexity. I give it 5 stars because the problems are awesome, though hand-holding nature of the proofs is almost too much for me to handle. However, there are other texts that set a faster pace and this really is a text meant for students with a low amount of exposure to formalism, and as such my only complaint (i.e., that at times it is too slow) is one of personal preference rather than some lacking or deficit on the part of the text. Therefore I have to give this 5 stars.

This is a paperback international edition published for India, Pakistan, Bangladesh, Nepal, and Sri Lanka. The contents of the book are exactly the same as the hardcover "regular" edition. The book itself is great and a fraction of the price for the hardcover book.

Needed to pick it up for a graduate class, so that I could follow their specific formulations (which are standard, I just didn't want to get surprised) for specific models of computation. I found it not much more or less approachable than other introductory texts. Not great for referencing; seemed hard to jump into the right section. Pick it up if recommended by your teacher or if you are self-teaching (much better reference than most on-line).

I mean, what can I say, it's a book with the correct material inside.

A really great book for learning the fundamentals of computer science theory. Excellent examples and review questions at the end of chapters. Good for beginners to the study of this field (like myself)!

Book is exactly as advertised (3rd edition, international version). Just be aware that some problems in the international version are different than in the actual third version.

This book was very clear in its presentation of the subject matter. If I read through it carefully, I was able to follow its logic and I learned quite a bit from it.

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