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<<计算理论基础>>

图书基本信息

书名：<<计算理论基础>>

13位ISBN编号：9787115196576

10位ISBN编号：7115196575

出版时间：2009

出版时间：人民邮电出版社

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页数：609

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前言

Theoretical computer science is the mathematical study of models ofcomputation. As such, it originated in the 1930s, well before the existenceof modern computers, in the work of the logicians Church, Godel, Kleene,Post, and Turing. This early work has had a profound influence on thepractical and theoretical development of computer science. Not only hasthe Turing machine model proved basic for theory, but the work of thesepioneers presaged many aspects of computational practice that are nowcommonplace and whose intellectual antecedents are typically unknown tousers. Included among these are the existence in principle of all-purpose（or universal） digital computers, the concept of a program as a list ofinstructions in a formal language, the possibility of interpretive programs,the duality between software and hardware, and the representation oflanguages by formal structures, based on productions. While the Spotlightin computer science has tended to fall on the truly breathtaking technolog-ical advances that have been taking place, important work in the founda-tions of the subject has continued as well. It is our purpose in writing thisbook to provide an introduction to the various aspects of theoreticalcomputer science for undergraduate and graduate students that is suffi-ciently comprehensive that the professional literature of treatises andresearch papers will become accessible to our readers.

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内容概要

《计算理论基础可计算性复杂性和语言(英文版·第2版)》是理论计算机科学领域的名作，是计算机科学核心主题的导论性教材。
全书分为可计算性、文法与自动机、逻辑学、复杂性及语义学5个部分，分别讲述了可计算性理论、形式语言、逻辑学与自动演绎、可计算复杂性(包括NP完全问题)和编程语言的语义等主题，并展示了它们之间如何相互关联。
《计算理论基础可计算性复杂性和语言(英文版·第2版)》是计算机及相关专业高年级本科生和研究生的理想教学参考书，对于计算机领域的专业人士也是很好的技术参考书。

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作者简介

作者：(美国)Maritin D.Davis (美国)Ron Sigal (美国)Elaine J.WeyukerMartin D．Davis，著名计算机科学家和数学家。
1950年在普林斯顿大学获得博士学位，与图灵同门(导师均为计算科学大师Alonzo Church)。
后长期任教于纽约大学柯朗数学研究所。
他是自动演绎理论先驱，还是DPLL算法的发明人之一，Post-Turing机更使其声名远播。
除本书外，他还著有经典名著Computability and Unsolvability。
Ron Sigal，资深软件工程师。
1983年在纽约大学获得计算机科学博士学位。
曾先后任教于纽约城市大学、意大利卡塔尼亚大学、耶鲁大学、Hofstra大学。
他参与的软件项目有NASA的火星探路者、JBoss等。
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编辑推荐

《计算理论基础可计算性复杂性和语言(英文版·第2版)》是理论计算机科学领域不朽的名作之一，它成功地将该领域所涵盖的可计算性理论、形式语言理论、复杂性理论和逻辑学这几个分散主题完美地融为一体进行阐述，展示了它们之间的内在关联，深刻地体现出理论计算机科学之美。
《计算理论基础可计算性复杂性和语言(英文版·第2版)》内容严谨，可读性强，配有丰富的习题，适合作为计算机和数学专业高年级本科生及研究生相关课程的教材，对于从事理论研究和软件开发的专业技术人员也是不可多得的参考书。

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