DNA Computing: New Computing Paradigms (Texts in Theoretical Computer Science. An EATCS Series)

Gheorghe Paun, Grzegorz Rozenberg, Arto Salomaa
*DOC | *audiobook | ebooks | Download PDF | ePub*

#2018676 in Books Springer 2006-06-01Original language:EnglishPDF # 1 9.21 x .94 x 6.14l, 1.60 #File Name: 3540641963400 pages | File size: 20.Mb

Gheorghe Paun, Grzegorz Rozenberg, Arto Salomaa : DNA Computing: New Computing Paradigms (Texts in Theoretical Computer Science. An EATCS Series) before purchasing it in order to gage whether or not it would be worth my time, and all praised DNA Computing: New Computing Paradigms (Texts in Theoretical Computer Science. An EATCS Series):

0 of 0 people found the following review helpful. Very Technical Analysis -1998 not 2005 bookBy K. WalkerFirst, this 'edition' listed in as 2005 seems to be identical to the edition I have listed in Lib of Congress as 1998-The Table of Contents and Index are identical down to the page numbers.Nonetheless it is a vary theoretical analysis of potential models which relate to DNA computing as Formal Language Theory models and the proofs of various capabilities of these languages which might be implementable with DNA techniques. This is not for the faint of heart or lay reader, ie not a mathematical/computing theorist.It is an excellent start if this is your perspective.11 of 13 people found the following review helpful. Very technical after chapter 2; reads like a calculus book.By tmetzler@uswest.netChapters 1 2 make for interesting and informative reading. The rest of the book reads like a calculus book and is obviously meant only for the most technically literate: you should know (and like) Chomsky grammars and want to learn about their (mathematical) relationship with DNA bases.Topics include: Sticker Systems, Watson-Crick Finite Automata, Splicing Systems, Universality by Finite H Systems, and Splicing Circular Strings

This is the first book on DNA computing, a molecular approach that may revolutionize computing-replacing silicon with carbon and microchips with DNA molecules. The book starts with an introduction to DNA computing, exploring the power of complementarity, the basics of biochemistry, and language and computation theory. It then brings the reader to the most advanced theories develop thus far in this emerging research area.

From the Back CoverThis is the first text and monograph about DNA computing, a molecular approach that might revolutionize our thinking and ideas about computing. Although it is too soon to predict whether computer hardware is likely to change from silicon to carbon and from microchips to DNA molecules, the theoretical premises have already been studied extensively. The book starts with an introduction to DNA-related matters, the basics of biochemistry and language and computation theory, and progresses to the advanced mathematical theory of DNA computing. Apart from being well-known scientists, all three authors are known for their lucid writing. Many of their previous books have become classics in their field, and this book too is sure to follow their example.