

Springer

1st  
edition

2002, XV, 489 p.

**Printed book**

Hardcover

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Hardcover

ISBN 978-3-540-43550-1

\$ 79,99

Available

**Discount group**

Professional Books (2)

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ISBN 978-3-642-07809-5

Computer Science : Programming Techniques

Valiente, Gabriel

# Algorithms on Trees and Graphs

- Algorithms are first presented on an intuitive basis, followed by a detailed exposition in a literate programming style
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Graph algorithms is a well-established subject in mathematics and computer science. Beyond classical application fields, like approximation, combinatorial optimization, graphics, and operations research, graph algorithms have recently attracted increased attention from computational molecular biology and computational chemistry. Centered around the fundamental issue of graph isomorphism, this text goes beyond classical graph problems of shortest paths, spanning trees, flows in networks, and matchings in bipartite graphs. Advanced algorithmic results and techniques of practical relevance are presented in a coherent and consolidated way. This book introduces graph algorithms on an intuitive basis followed by a detailed exposition in a literate programming style, with correctness proofs as well as worst-case analyses. Furthermore, full C++ implementations of all algorithms presented are given using the LEDA library of efficient data structures and algorithms. Numerous illustrations, examples, and exercises, and a comprehensive bibliography support students and professionals in using the book as a text and source of reference

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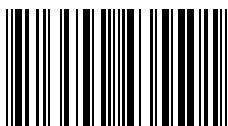
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