



# Theory of Computational Complexity (Wiley Series in Discrete Mathematics and Optimization)

*Ding-Zhu Du, Ker-I Ko*

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Praise for the *First Edition*

"...complete, up-to-date coverage of computational complexity theory...the book promises to become the standard reference on computational complexity." -*Zentralblatt MATH*

A thorough revision based on advances in the field of computational complexity and readers' feedback, the *Second Edition of Theory of Computational Complexity* presents updates to the principles and applications essential to understanding modern computational complexity theory. The new edition continues to serve as a comprehensive resource on the use of software and computational approaches for solving algorithmic problems and the related difficulties that can be encountered.

Maintaining extensive and detailed coverage, *Theory of Computational Complexity, Second Edition*, examines the theory and methods behind complexity theory, such as computational models, decision tree complexity, circuit complexity, and probabilistic complexity. The *Second Edition* also features recent developments on areas such as NP-completeness theory, as well as:

- A new combinatorial proof of the PCP theorem based on the notion of expander graphs, a research area in the field of computer science
- Additional exercises at varying levels of difficulty to further test comprehension of the presented material
- End-of-chapter literature reviews that summarize each topic and offer additional sources for further study

*Theory of Computational Complexity, Second Edition*, is an excellent textbook for courses on computational theory and complexity at the graduate level. The book is also a useful reference for practitioners in the fields of computer science, engineering, and mathematics who utilize state-of-the-art software and computational methods to conduct research.



