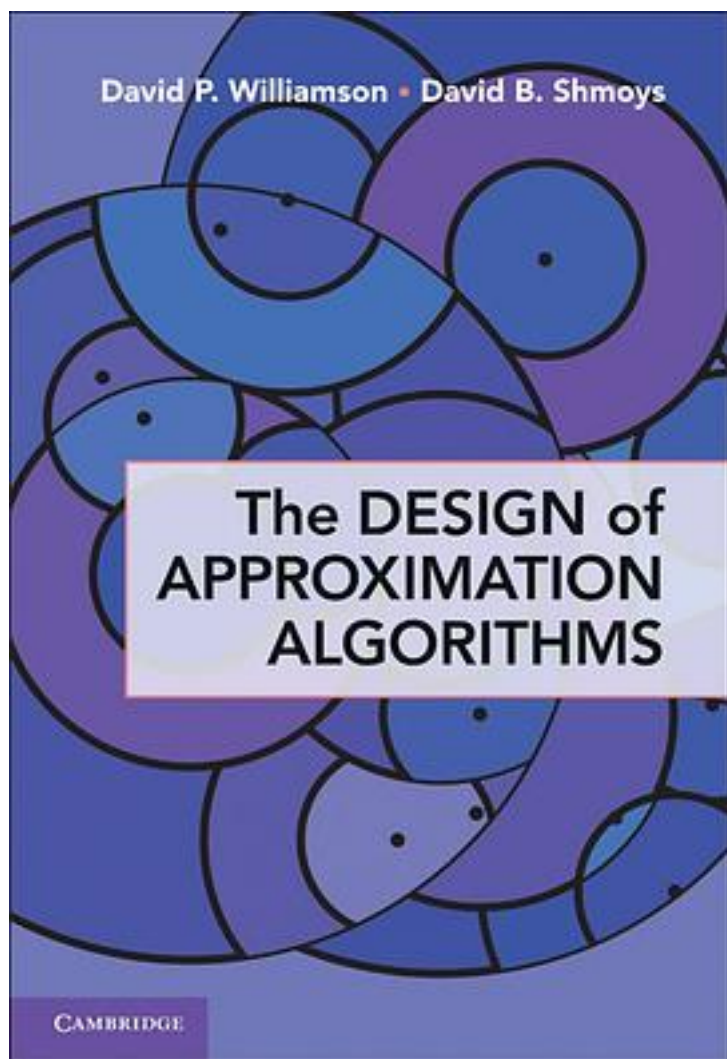


The Design of Approximation Algorithms



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Discrete optimization problems are everywhere, from traditional operations research planning (scheduling, facility location and network design); to computer science databases; to advertising issues in viral marketing. Yet most such problems are NP-hard; unless $P = NP$, there are no efficient algorithms to find optimal solutions. This book shows how to design approximation algorithms: efficient algorithms that find provably near-optimal solutions. The book is organized around central algorithmic techniques for designing approximation algorithms, including greedy and local search algorithms, dynamic programming, linear and semidefinite programming, and randomization. Each chapter in the first section is devoted to a single algorithmic technique applied to several different problems, with more sophisticated treatment in the second section. The book also covers methods for proving that optimization problems are hard to approximate. Designed as a textbook for graduate-level algorithm courses, it will also serve as a reference for researchers interested in the heuristic solution of discrete optimization problems.

作者介绍:

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标签

算法

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评论

个人觉得比Vijay的写得好。

还是比较全的 可以再加一些property testing的模型 比如 monotonicity, regularity lemma, triangle freeness 之类的

题材组织的还不错，不过例题的讲解没有vazirani那本清楚

图书馆发现此书，阅读，大赞，遂从ebay上30刀购来旧书一本；说是旧书，其实跟新书没区别，只是侧面有些黑罢了；两位作者都是大牛级人物，写得深入浅出，受益匪浅

个人觉得是近似算法最好的教材。

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书评

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