

Advances in Randomized Parallel Computing (Combinatorial Optimization) by Panos M. Pardalos, Sanguthevar Rajasekaran pdf



ISBN: 0792357140

ISBN13: 978-0792357148

Author: Panos M. Pardalos, Sanguthevar Rajasekaran

Book title: Advances in Randomized Parallel Computing (Combinatorial Optimization)

Pages: 287

Publisher: Springer; 1999 edition (May 31, 1999)

Language: English

Category: Hardware and DIY

Size PDF version: 1415 kb

Size ePUB version: 1569 kb

Size FB2 version: 1110 kb

Other formats: lrf docx lit rtf

The technique of randomization has been employed to solve numerous problems of computing both sequentially and in parallel. Examples of randomized algorithms that are asymptotically better than their deterministic counterparts in solving various fundamental problems abound. Randomized algorithms have the advantages of simplicity and better performance both in theory and often in practice. This book is a collection of articles written by renowned experts in the area of randomized parallel computing. A brief introduction to randomized algorithms in the analysis of algorithms, at least three different measures of performance can be used: the best case, the worst case, and the average case. Often, the average case run time of an algorithm is much smaller than the worst case. For instance, the worst case run time of Hoare's quicksort is $O(n^2)$, whereas its average case run time is only $O(n \log n)$. The average case analysis is conducted with an assumption on the input space. The assumption made to arrive at the $O(n \log n)$ average run time for quicksort is that each input permutation is equally likely. Clearly, any average case analysis is only as good as how valid the assumption made on the input space is. Randomized algorithms achieve superior performances without making any assumptions on the inputs by making coin flips within the algorithm. Any analysis done of randomized algorithms will be valid for all possible inputs.



Related PDF to [Advances in Randomized Parallel Computing \(Combinatorial Optimization\)](#) by Panos M. Pardalos, Sanguthevar Rajasekaran

1. [Algorithms and Architectures for Parallel Processing \(Ica3Pp 2002\), 5th International Conference by IEEE International Conference on Algorithms and Architectures for Parallel Processing](#)
2. [Approximation, Randomization and Combinatorial Optimization. Algorithms and Techniques: 8th International Workshop on Approximation Algorithms for ... \(Lecture Notes in Computer Science\) by Chandra Chekuri, Klaus Jansen, José D.P. Rolim, Luca Trevisan](#)
3. [Hard Real-Time Computing Systems: Predictable Scheduling Algorithms and Applications \(Real-Time Systems Series\) by Giorgio C. Buttazzo](#)
4. [The OTHER Worst-Case Scenario Survival Handbook: A Parody by Gene Doucette](#)
5. [Randomized Algorithms for Analysis and Control of Uncertain Systems \(Communications and Control Engineering\) by Roberto Tempo, Giuseppe Calafiore, Fabrizio Dabbene](#)
6. [Parallel Processing and Parallel Algorithms: Theory and Computation by Seyed H Roosta](#)
7. [The Worst Case Scenario Survival Handbook: Dating & Sex \(Worst-Case Scenario Survival Handbooks \(Audio\)\) by Laura Hamilton \(na\), Joshua Piven](#)
8. [Randomized Response: A Method for Sensitive Surveys \(Quantitative Applications in the Social Sciences\) by Paul E. Tracy, James Alan Fox](#)
9. [High-Performance Scientific Computing: Algorithms and Applications by Michael W. Berry, Kyle A. Gallivan, Efstratios Gallopoulos, Ananth Grama, Bernard Philippe, Yousef Saad, Faisal Saied](#)
10. [Parallel Computing: Principles and Practice by T. J. Fountain](#)