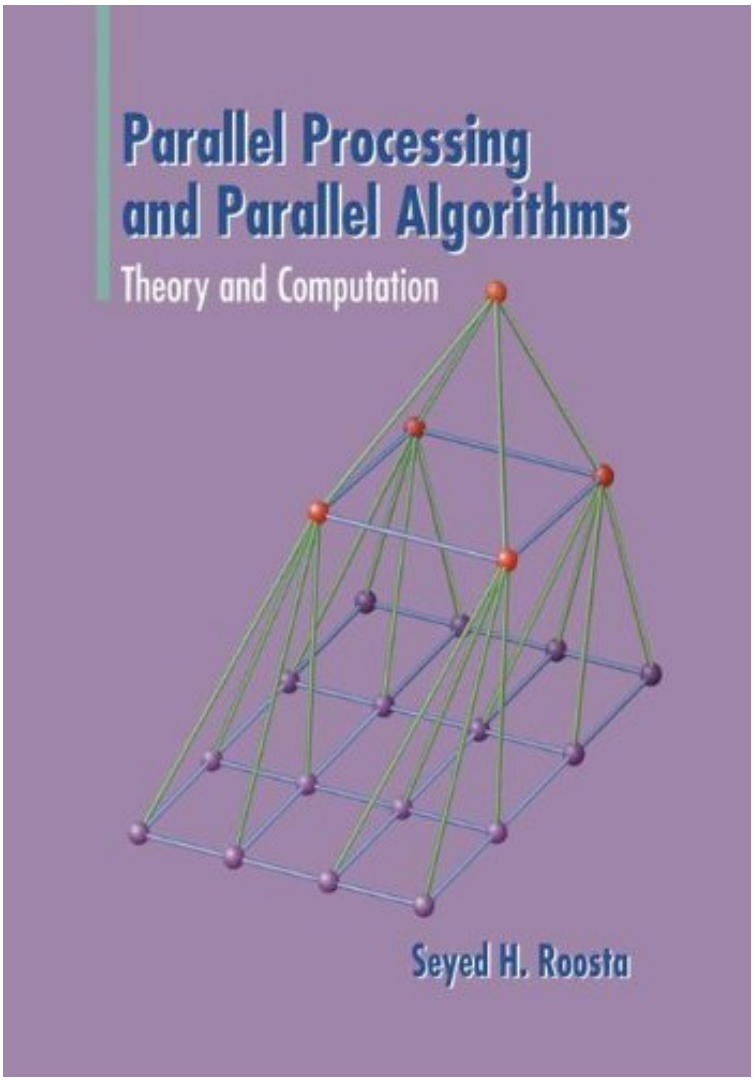
Parallel Processing and Parallel Algorithms: Theory and Computation

Von Seyed H Roosta
*audiobook | *ebooks | Download PDF | ePub | DOC*



Produktinformation Verffentlicht am: 2012-12-06Erscheinungsdatum: 2012-12-06File Name: B000W14TEU | File size: 76.Mb

Von Seyed H Roosta : Parallel Processing and Parallel Algorithms: Theory and Computation before purchasing it in order to gage whether or not it would be worth my time, and all praised Parallel Processing and Parallel Algorithms: Theory and Computation:

KundenrezensionenHilfreichste Kundenrezensionen1 von 2 Kunden fanden die folgende Rezension hilfreich. Wow, what a great book!Von Rob P. LevyIf this is not the authoritative text on PDP, then I don't know PDP is. It clearly

states everything you need to know clearly. When I grow up, I want to be a parallel algorithm.

KurzbeschreibungMotivation It is now possible to build powerful single-processor and multiprocessor systems and use them efficiently for data processing, which has seen an explosive ex pansion in many areas of computer science and engineering. One approach to meeting the performance requirements of the applications has been to utilize the most powerful single-processor system that is available. When such a system does not provide the performance requirements, pipelined and parallel process ing structures can be employed. The concept of parallel processing is a depar ture from sequential processing. In sequential computation one processor is in volved and performs one operation at a time. On the other hand, in parallel computation several processors cooperate to solve a problem, which reduces computing time because several operations can be carried out simultaneously. Using several processors that work together on a given computation illustrates a new paradigm in computer problem solving which is completely different from sequential processing. From the practical point of view, this provides sufficient justification to investigate the concept of parallel processing and related issues, such as parallel algorithms. Parallel processing involves utilizing several factors, such as parallel architectures, parallel algorithms, parallel programming lan guages and performance analysis, which are strongly interrelated. In general, four steps are involved in performing a computational problem in parallel. The first step is to understand the nature of computations in the specific application domain.KurzbeschreibungMotivation It is now possible to build powerful single-processor and multiprocessor systems and use them efficiently for data processing, which has seen an explosive ex pansion in many areas of computer science and engineering. One approach to meeting the performance requirements of the applications has been to utilize the most powerful single-processor system that is available. When such a system does not provide the performance requirements, pipelined and parallel process ing structures can be employed. The concept of parallel processing is a depar ture from sequential processing. In sequential computation one processor is in volved and performs one operation at a time. On the other hand, in parallel computation several processors cooperate to solve a problem, which reduces computing time because several operations can be carried out simultaneously. Using several processors that work together on a given computation illustrates a new paradigm in computer problem solving which is completely different from sequential processing. From the practical point of view, this provides sufficient justification to investigate the concept of parallel processing and related issues, such as parallel algorithms. Parallel processing involves utilizing several factors, such as parallel architectures, parallel algorithms, parallel programming lan guages and performance analysis, which are strongly interrelated. In general, four steps are involved in performing a computational problem in parallel. The first step is to understand the nature of computations in the specific application domain.Synopsis This book covers the essential elements of parallel processing and parallel algorithms. It is unique in that it is a self-contained book covering everything fundamental of parallel processing from computer architecture to parallel programming and parallel algorithms. It is designed to function as a text for an undergraduate course in parallel processing, but also works well as a comprehensive reference for professionals interested in all phases of parallel processing and parallel programming.