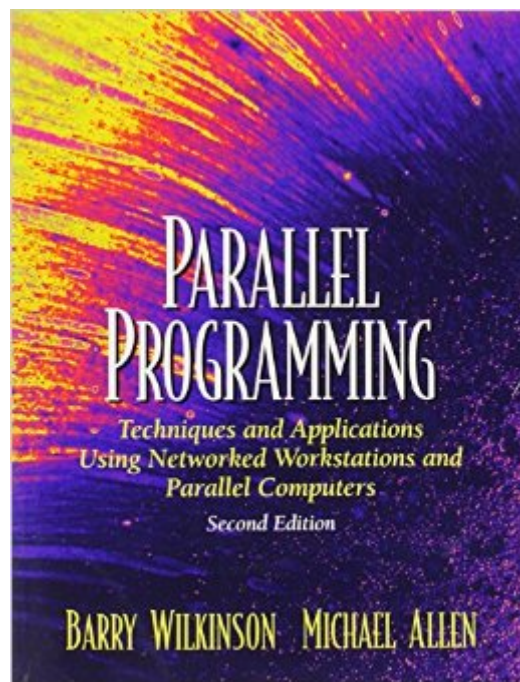# Parallel Programming: Techniques And Applications Using Networked Workstations And Parallel Computers (2nd Edition)

Synopsis

This accessible text covers the techniques of parallel programming in a practical manner that enables readers to write and evaluate their parallel programs. Supported by the National Science Foundation and exhaustively class-tested, it is the first text of its kind that does not require access to a special multiprocessor system, concentrating instead on parallel programs that can be executed on networked computers using freely available parallel software tools.   The book covers the timely topic of cluster programming, interesting to many programmers due to the recent availability of low-cost computers. Uses MPI pseudocodes to describe algorithms and allows different programming tools to be implemented, and provides readers with thorough coverage of shared memory programming, including Pthreads and OpenMP.   Useful as a professional reference for programmers and system administrators.

Book Information

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Customer Reviews

Clusters of Computers have become an appealing platform for cost-effective parallel computing and more particularly so for teaching parallel processing. At Monash University School of Computer Science and Software Engineering, I am teaching "CSC433: Parallel Systems" subject for BSc Honours students. The course covers various communication models and languages for parallel programming. Cluster Computing is one of the focused topics of this course and I found two books that suits well for this course--both published by Prentice Hall in 1999. The first one is: "High Performance Cluster Computing" by R. Buyya (editor) that I use for teaching cluster computer

architecture and systems issue. The second one is "Parallel Programming" by B. Wilkinson and M. Allen that I use for teaching programming clusters using message-passing concepts. I found both books complimentary to each other.B. Wilkinson and M. Allen book discusses key aspects of parallel programming concepts and generic constructs with practical example programs. Each concept has been explained using figures and flow diagrams. The programs illustrated mostly in C using generic parallel programming constructs and popular parallel programming interfaces such as Threads, PVM, and MPI. The authors have also created an excellent web resources home page that offers presentation slides, program source codes, and instructors manual. All these tools make teaching parallel programming course, a pleasing experience. I have no hesitation in recommending this book for anyone serious about teaching parallel programming on clusters.

The book does quite well in explaining the concepts of parallel computing and programming, and I have very few complaints about anything actually written in the book. (A companion CD with some sample MPI/PVM programs would have been nice.) However, as well as this book is written and organized, it is almost comical to have this size of book (paperback, at that) costing nearly $... If the book would have cost about $.. less and had the companion CD, it would have been five stars.

The book serves as a good introduction to several advanced computing techniques. It isn't for beginners in computer science or networking, and it isn't worth the list price. Unfortunately, the topic isn't something you are likely to find in a career, so it isn't useful to general computer science students.It is great as a learning book, in-depth enough that you could use it for on-the-job learning. It covers the things you need to know for real-world use.I would have given it 5 stars, except it isn't all that great as a reference; you will probably end up using online help for whatever communications package you use. It's the kind of book you read once or twice, then give away to younger collegues.

Covers from basics of the algorithm to implementation in parallel. And of course there's analysis of cost and efficiency in much easy to understand language. Covers wide variety of parallel techniques.

This would be a great reference manual, but I am using this test in my parallel processing course and the pseudocode is confusing and the MPI functions are introduced with poor descriptions.

This book helped me pass the class, the professor wasn't really giving too many useful lectures so had to teach myself Open MPI and parallel programming paradigms using this book.

Parallel Programming: Techniques and Applications Using Networked Workstations and Parallel Computers (2nd Edition) Using MPI - 2nd Edition: Portable Parallel Programming with the Message Passing Interface (Scientific and Engineering Computation) Great Big World of Computers - History and Evolution : 5th Grade Science Series: Fifth Grade Book History Of Computers for Kids (Children's Computer Hardware Books) Parallel Programming with Intel Parallel Studio XE Programming in Micro-PROLOG (Ellis Horwood Series in Computers and Their Applications) Functional Programming with Hope (Ellis Horwood Series in Computers and Their Applications) CUDA Programming: A Developer's Guide to Parallel Computing with GPUs (Applications of Gpu Computing) Programming Massively Parallel Processors: A Hands-on Approach (Applications of GPU Computing Series) Short Stories in Spanish: New Penguin Parallel Text (New Penguin Parallel Texts) (Spanish and English Edition) Learn German III: Parallel Text - Easy Stories (German - English) Bilingual - Dual Language (Learning German with Parallel Text 3) (German Edition) Java: The Simple Guide to Learn Java Programming In No Time (Programming,Database, Java for dummies, coding books, java programming)
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