Parallel Computer Architecture: A Hardware/Software Approach (The Morgan Kaufmann Series in Computer Architecture and Design)

Von David Culler, Jaswinder Pal Singh, Anoop Gupta
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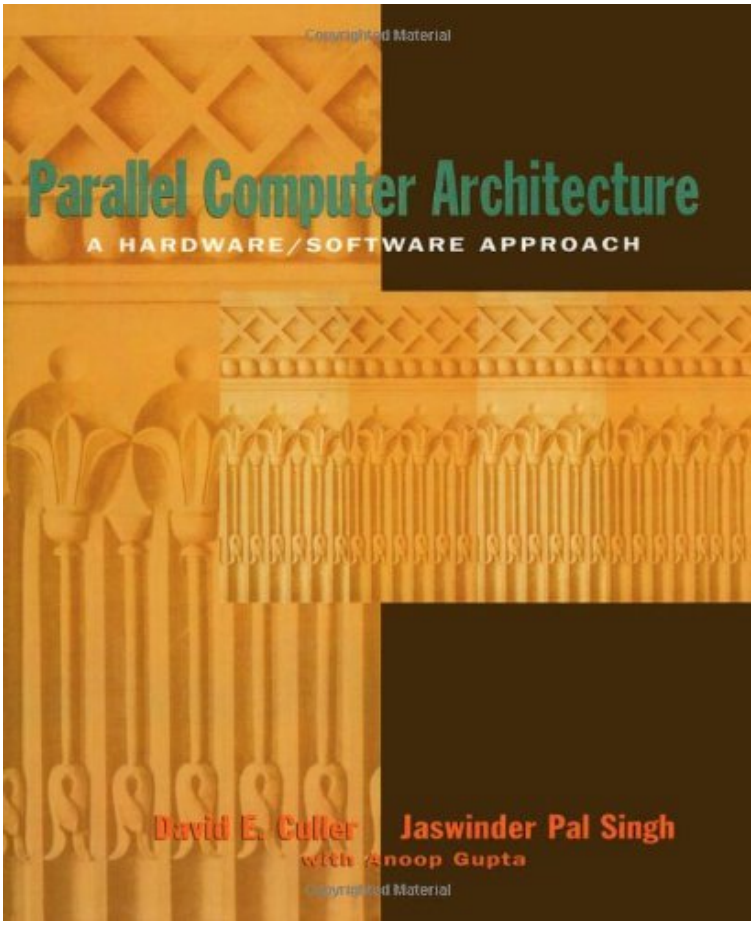

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Von David Culler, Jaswinder Pal Singh, Anoop Gupta : Parallel Computer Architecture: A Hardware/Software Approach (The Morgan Kaufmann Series in Computer Architecture and Design) before purchasing it in order to gage whether or not it would be worth my time, and all praised Parallel Computer Architecture: A Hardware/Software Approach (The Morgan Kaufmann Series in Computer Architecture and Design):

KundenrezensionenHilfreichste Kundenrezensionen1 von 1 Kunden fanden die folgende Rezension hilfreich. Great book for beginners and even experienced professionals!Von Ein KundeI have read this book and its a very good book which explains all the details ranging from cache architecture to the basics of parallel computer programming. I have not seen any book that talks in detail about SMP and cc-numa.0 von 0 Kunden fanden die folgende Rezension

hilfreich. Up-to-date information, but not in a simplified wayVon Ein Kundethis book was the recommended textbook for parallel architecture course which i took, it is a great book,since it covers the latest fields in parallel computers.But too difficult for a beginner, cause topics are explained in an advanced way, assuming a previous knowledge in parallel processing subjects.I find it more suitable for graduate or profissionals in this field rather than undergraduate students.

KurzbeschreibungThe most exciting development in parallel computer architecture is the convergence of traditionally disparate approaches on a common machine structure. This book explains the forces behind this convergence of shared-memory, message-passing, data parallel, and data-driven computing architectures. It then examines the design issues that are critical to all parallel architecture across the full range of modern design, covering data access, communication performance, coordination of cooperative work, and correct implementation of useful semantics. It not only describes the hardware and software techniques for addressing each of these issues but also explores how these techniques interact in the same system. Examining architecture from an application-driven perspective, it provides comprehensive discussions of parallel programming for high performance and of workload-driven evaluation, based on understanding hardware-software interactions.synthesizes a decade of research and development for practicing engineers, graduate students, and researchers in parallel computer architecture, system software, and applications developmentpresents in-depth application case studies from computer graphics, computational science and engineering, and data mining to demonstrate sound quantitative evaluation of design trade-offsdescribes the process of programming for performance, including both the architecture-independent and architecture-dependent aspects, with examples and case-studiesillustrates bus-based and network-based parallel systems with case studies of more than a dozen important commercial designsKurzbeschreibungThe most exciting development in parallel computer architecture is the convergence of traditionally disparate approaches on a common machine structure. This book explains the forces behind this convergence of shared-memory, message-passing, data parallel, and data-driven computing architectures. It then examines the design issues that are critical to all parallel architecture across the full range of modern design, covering data access, communication performance, coordination of cooperative work, and correct implementation of useful semantics. It not only describes the hardware and software techniques for addressing each of these issues but also explores how these techniques interact in the same system. Examining architecture from an application-driven perspective, it provides comprehensive discussions of parallel programming for high performance and of workload-driven evaluation, based on understanding hardware-software interactions.synthesizes a decade of research and development for practicing engineers, graduate students, and researchers in parallel computer architecture, system software, and applications developmentpresents in-depth application case studies from computer graphics, computational science and engineering, and data mining to demonstrate sound quantitative evaluation of design trade-offsdescribes the process of programming for performance, including both the architecture-independent and architecture-dependent aspects, with examples and case-studiesillustrates bus-based and network-based parallel systems with case studies of more than a dozen important commercial designsSynopsis The most exciting development in parallel computer architecture is the convergence of traditionally disparate approaches on a common machine structure. This book explains the forces behind this convergence of shared-memory, message-passing, data parallel, and data-driven computing architectures. It then examines the design issues that are critical to all parallel architecture across the full range of modern design, covering data access, communication performance, coordination of cooperative work, and correct implementation of useful semantics. It not only describes the hardware and software techniques for addressing each of these issues but also explores how these techniques interact in the same system. Examining architecture from an application-driven perspective, it provides comprehensive discussions of parallel programming for high performance and of workload-driven evaluation, based on understanding hardware-software interactions.It: synthesizes a decade of research and development for practicing engineers, graduate students, and researchers in parallel computer architecture, system software, and applications development; presents in-depth application case studies from computer graphics, computational science and engineering, and data mining to demonstrate sound quantitative evaluation of design trade-offs; describes the process of programming for performance, including both the architecture-independent and architecture-dependent aspects, with examples and case-studies; and, illustrates bus-based and network-based parallel systems with case studies of more than a dozen important commercial designs.