[PDF] Programming Massively Parallel Processors: A Hands-on Approach (Applications Of GPU Computing Series)

David B. Kirk, Wen-mei W. Hwu - pdf download free book

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Description:

Review

"For those interested in the GPU path to parallel enlightenment, this new book from David Kirk and

Wen-mei Hwu is a godsend, as it introduces CUDA (tm), a C-like data parallel language, and Tesla(tm), the architecture of the current generation of NVIDIA GPUs. In addition to explaining the language and the architecture, they define the nature of data parallel problems that run well on the heterogeneous CPU-GPU hardware ... This book is a valuable addition to the recently reinvigorated parallel computing literature." ***- David Patterson, Director of The Parallel Computing Research Laboratory and the Pardee Professor of Computer Science, U.C. Berkeley. Co-author of Computer Architecture: A Quantitative Approach***

"*Written by two teaching pioneers, this book is the definitive practical reference on programming massively parallel processors--a true technological gold mine. The hands-on learning included is cutting-edge, yet very readable. This is a most rewarding read for students, engineers, and scientists interested in supercharging computational resources to solve today's and tomorrow's hardest problems.*" ***- Nicolas Pinto, MIT, NVIDIA Fellow, 2009***

"*I have always admired Wen-mei Hwu's and David Kirk's ability to turn complex problems into easy-to-comprehend concepts. They have done it again in this book. This joint venture of a passionate teacher and a GPU evangelizer tackles the trade-off between the simple explanation of the concepts and the in-depth analysis of the programming techniques. This is a great book to learn both massive parallel programming and CUDA.*" ***- Mateo Valero, Director, Barcelona Supercomputing Center***

"*The use of GPUs is having a big impact in scientific computing. David Kirk and Wen-mei Hwu's new book is an important contribution towards educating our students on the ideas and techniques of programming for massively parallel processors.*" ***- Mike Giles, Professor of Scientific Computing, University of Oxford***

"*This book is the most comprehensive and authoritative introduction to GPU computing yet. David Kirk and Wen-mei Hwu are the pioneers in this increasingly important field, and their insights are invaluable and fascinating. This book will be the standard reference for years to come.*" ***- Hanspeter Pfister, Harvard University***

"*This is a vital and much-needed text. GPU programming is growing by leaps and bounds. This new book will be very welcomed and highly useful across inter-disciplinary fields.*" ***- Shannon Steinfadt, Kent State University***

"*GPUs have hundreds of cores capable of delivering transformative performance increases across a wide range of computational challenges. The rise of these multi-core architectures has raised the need to teach advanced programmers a new and essential skill: how to program massively parallel processors.*" - *CNNMoney.com*

"*This book is a valuable resource for all students from science and engineering disciplines where parallel programming skills are needed to allow solving compute-intensive problems.*"***--BCS: The British Computer Society's online journal***

From the Back Cover

Programming Massively Parallel Processors: A Hands-on Approach shows both student and professional alike the basic concepts of parallel programming and GPU architecture. Various techniques for constructing parallel programs are explored in detail. Case studies demonstrate the development process, which begins with computational thinking and ends with effective and

efficient parallel programs.

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