



General Purpose Computation on Graphic Processing Units

By Khan, Fiaz Gul

Condition: New. Publisher/Verlag: LAP Lambert Academic Publishing | With OpenCL | Computational Science has emerged as a third pillar of science along with theory and experiment, where the parallelization for scientific computing is promised by different shared and distributed memory architectures such as, super-computer systems, grid and cluster based systems, multi-core and multiprocessor systems etc. In the recent years the use of GPUs (Graphic Processing Units) for General purpose computing commonly known as GPGPU made it an exciting addition to high performance computing systems (HPC) with respect to price and performance ratio. Current GPUs consist of several hundred computing cores arranged in streaming multi-processors so the degree of parallelism is promising. Moreover with the development of new and easy to use interfacing tools and programming languages such as OpenCL and CUDA made the GPUs suitable for different computation demanding applications such as the one I have discussed in this book that is micro-magnetic simulations. When we talk about GPGPU the first question that most frequently arises is that why GPU is so faster than CPU. In this book I tried to answer this fundamental question with the help of real world example and the results. | Format: Paperback | Language/Sprache: english...



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