

1. Record Nr.	UNINA9910815496803321
Titolo	Parallel computing : on the road to exascale / / edited by Gerhard R. Joubert [and four others]
Pubbl/distr/stampa	Amsterdam, Netherlands ; ; Berlin, [Germany] ; ; Washington, District of Columbia : , : IOS Press, , 2016 ©2016
ISBN	1-61499-621-0
Descrizione fisica	1 online resource (872 p.)
Collana	Advances in Parallel Computing, , 1879-808X ; ; Volume 27
Disciplina	004.35
Soggetti	Parallel processing (Electronic computers) Parallel programming (Computer science)
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"As a need arose to stimulate the development of parallel computing technologies, the biennial International Conference series on Parallel Computing (ParCo) was started in 1983."
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Title Page; Preface; Conference Organisation; Contents; Invited Talks; Bio-Inspired Massively-Parallel Computation; Automatic Tuning of Task Scheduling Policies on Multicore Architectures; Architectures and Performance; Algorithms; Algorithmic Scheme for Hybrid Computing with CPU, Xeon-Phi/MIC and GPU Devices on a Single Machine; A Many-Core Machine Model for Designing Algorithms with Minimum Parallelism Overheads; Performance; CPU Performance Analysis Using Score-P on PRIMEHPC FX100 Supercomputer; Performance Improvements of Polydisperse DEM Simulations Using a Loose Octree Approach; Execution Performance Analysis of the ABySS Genome Sequence Assembler Using Scalasca on the K Computer; Performance Model Based on Memory Footprint for OpenMP Memory Bound Applications; Evaluating OpenMP Performance on Thousands of Cores on the Numascale Architecture; Acceleration of Large Scale OpenFOAM Simulations on Distributed Systems with Multicore CPUs and GPUs; Optimized Variant-Selection Code Generation for Loops on Heterogeneous Multicore Systems; MPI Communication on MPPA Many-

Core NoC: Design, Modeling and Performance Issues; Drivers for Device to Device Streaming  
Programming Models and Methods; Skeletons; Portable Parallelization of the EDGE CFD Application for GPU-Based Systems Using the SkePU Skeleton Programming Library; Structured Parallel Implementation of Tree Echo State Network Model Selection; Java Implementation of Data Parallel Skeletons on GPUs; Data Parallel Patterns in Erlang/OpenCL; Hybrid Coarrays: A PGAS Feature for Many-Core Architectures; Lapedo: Hybrid Skeletons for Programming Heterogeneous Multicore Machines in Erlang; Accelerators; Evaluation of 3-D Stencil Codes on the Intel Xeon Phi Coprocessor  
Hierarchical Parallelism in a Physical Modelling Synthesis  
CodeHarnessing CUDA Dynamic Parallelism for the Solution of Sparse Linear Systems; Model-Driven Development of GPU Applications; Exploring the Offload Execution Model in the Intel Xeon Phi via Matrix Inversion; Programming GPUs with C++14 and Just-In-Time Compilation; Resource Management; Active Packet Pacing as a Congestion Avoidance Technique in Interconnection Network; Hybrid Parallelization of Hyper-Dimensional Vlasov Code with OpenMP Loop Collapse Directive  
Active Resource Management for Multi-Core Runtime Systems Serving Malleable Applications; Improving Energy-Efficiency of Static Schedules by Core Consolidation and Switching Off Unused Cores; Efficient Parallel Linked List Processing; Streams ; Streams as an Alternative to Halo Exchange; An Embedded C++ Domain-Specific Language for Stream Parallelism; Pipeline Template for Streaming Applications on Heterogeneous Chips; Applications; Numerical Methods; Efficient and Scalable Distributed-Memory Hierarchization Algorithms for the Sparse Grid Combination Technique  
Adapting a Finite-Element Type Solver for Bioelectromagnetics to the DEEP-ER Platform

---