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Livello bibliografico	Monografia
Nota di contenuto	Online Fault Classification in HPC Systems through Machine Learning -- Accelerating Data-Dependence Profiling with Static Hints -- Multi-Valued Expression Analysis for Collective Checking -- Towards Portable Online Prediction of Network Utilization using MPI-level Monitoring -- A Comparison of Random Task Graph Generation Methods for Scheduling Problems -- Code Region Characterization Using a Reduced

Space of Hardware Counters -- Combining checkpointing and data compression to accelerate adjoint-based optimization problems -- Linear Time Algorithms for Multiple Cluster Scheduling and Multiple Strip Packing -- Scheduling on Two Unbounded Resources with Communication Costs -- Improving Fairness in a Large Scale HTC System Through Workload Analysis and Simulation -- Contention-aware Task Scheduler for Concurrent Hierarchical Operations -- Load-Balancing for Parallel Delaunay Triangulations -- Design-Space Exploration with Multi-Objective Resource-Aware Modulo Scheduling -- Implementing YewPar: a Framework for Parallel Tree Search -- PLB-HAC: Dynamic Load-Balancing for Heterogeneous Accelerator Clusters -- Enhancing the Programmability and Performance Portability of GPU Tensor Operations -- Unified and Scalable Incremental Recommenders with Consumed Item Packs -- Declarative Big Data Analysis for High-Energy Physics: TOTEM Use Case -- Clustering as Approximation Method to Optimize Hydrological Simulations -- YOLO: Speeding up VM and Docker Boot Time by reducing I/O operations -- Celerity: High-level C++ for Accelerator Clusters -- Dataflow Execution of Hierarchically Tiled Arrays -- Scalable FIFO Channels for Programming via Communicating Sequential Processes -- TWA – Ticket Locks Augmented with a Waiting Array -- Enabling Resilience in Asynchronous Many-Task Programming Models -- Avoiding Scalability Collapse by Restricting Concurrency -- Graph Coloring using GPUs -- Featherlight Speculative Task Parallelism -- One Table to Count Them All: Parallel Frequency Estimation on Single-Board Computers -- Fine-grained MPI+OpenMP plasma simulations: communication overlap with dependent tasks -- Parallel Adaptive Sampling with almost no Synchronization -- Parallel Streaming Random Sampling -- Cholesky and Gram-Schmidt Orthogonalization for Tall-and-Skinny QR Factorizations on Graphic Processors -- Automatic exploration of reduced floating-point representations in iterative methods -- Linear Systems Solvers for Distributed Memory Machines with GPU Accelerators -- Radio-Astronomical Imaging: FPGAs vs GPUs.

Sommario/riassunto

This book constitutes the proceedings of the 25th International Conference on Parallel and Distributed Computing, Euro-Par 2019, held in Göttingen, Germany, in August 2019. The 36 full papers presented in this volume were carefully reviewed and selected from 142 submissions. They deal with parallel and distributed computing in general, focusing on support tools and environments; performance and power modeling, prediction and evaluation; scheduling and load balancing; high performance architectures and compilers; data management, analytics and deep learning; cluster and cloud computing; distributed systems and algorithms; parallel and distributed programming, interfaces, and languages; multicore and manycore parallelism; theory and algorithms for parallel computation and networking; parallel numerical methods and applications; accelerator computing; algorithms and systems for bioinformatics; and algorithms and systems for digital humanities. .