1. Record Nr. UNISA996534467703316

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Titolo	Euro-Par 2022: Parallel Processing Workshops [[electronic resource]] : Euro-Par 2022 International Workshops, Glasgow, UK, August 22–26, 2022, Revised Selected Papers / / edited by Jeremy Singer, Yehia Elkhatib, Dora Blanco Heras, Patrick Diehl, Nick Brown, Aleksandar Ilic
Pubbl/distr/stampa	Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2023
ISBN	9783031312090 9783031312083
Edizione	[1st ed. 2023.]
Descrizione fisica	1 online resource (313 pages)
Collana	Lecture Notes in Computer Science, , 1611-3349 ; ; 13835
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Disciplina	621.39 004.6
Soggetti	Computer engineering Computer networks Computer Engineering and Networks
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	AMTE – Asynchronous Many-Task Systems for Exascale -- Quantifying Overheads in Charm++ and HPX using Task Bench -- A Portable and Heterogeneous LU Factorization on IRIS -- Halide Code Generation Framework in Phylanx -- DSL-HPC – Domain Specific Languages for High-Performance Computing -- Exploring the suitability of the Cerebras Wafer Scale Engine for stencil-based computation codes -- Performance of the Vipera framework for DSLs on micro-core architectures -- FFTc: An MLIR Dialect for Developing HPC Fast Fourier Transform Libraries -- HeteroPar – Algorithms, Models and Tools for Parallel Computing on Heterogeneous Platforms -- Programming Heterogeneous Architectures Using Hierarchical Tasks -- A C++ library for memory layout and performance portability of scientific applications -- Implementation and Performance Evaluation of Memory System

using Addressable Cache for HPC applications on HBM2 equipped FPGAs -- Programming abstractions for preemptive scheduling in FPGAs using partial reconfiguration -- Modeling Task Mapping for Data-intensive Applications in Heterogeneous Systems -- Mapping Tree-shaped Workflows on Memory-heterogeneous Architectures -- Hetero-Vis: A Framework for Latency Optimized Deployment of Convolutional Neural Networks on Heterogeneous Architectures -- Rapid development of OS support with PMCSched for scheduling on asymmetric multicore systems -- HIPLZ: Enabling Performance Portability for Exascale Systems -- StorAlloc: A Simulator for Job Scheduling on Heterogeneous Storage Resources -- Performance and scalability analysis of AI-accelerated CFD simulations across various computing platforms -- Miscellaneous Workshops -- Performance Portability Assessment: Non-negative Matrix Factorization as a case study -- Task-level Checkpointing System for Task-based Parallel Workflows -- Euro-Par PhD Symposium -- A Stochastic Programming Approach for an Enhanced Performance of a Multi-committees Byzantine Fault Tolerant Algorithm -- Coupe: a modular, multi-threaded mesh partitioning platform -- Preliminary study of resource allocation in wireless communications -- Benchmarking Parallelism in Unikernels -- Machine Learning methodologies to support HPC systems operations: Anomaly detection -- FPGAs in supercomputers: performance through dataflow programming and flexibility.

Sommario/riassunto

This book constitutes revised selected papers from the workshops held at the 28th International European Conference on Parallel and Distributed Computing, Euro-Par 2022, which took place in Glasgow, UK, in August 22–26, 2022 Out of a total of 35 submissions 24 papers have been accepted, 19 of these are included in this book. They stem from the following workshops: - Workshop on Algorithms, Models and Tools for Parallel Computing on Heterogeneous Platforms (HeteroPar) - Workshop on Asynchronous Many-Task systems for Exascale (AMTE) - Workshop on Domain Specific Languages for High-Performance Computing (DSL-HPC) - Workshop on Distributed and Heterogeneous Programming in C and C++ (DHPCC++) - Workshop on Resiliency in High Performance Computing in Clouds, Grids, and Clusters (Resilience) In addition, the proceedings also contains 6 extended abstracts from the PhD Symposium. .