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Soggetti	Mathematics—Data processing Computer science Computer engineering Computer networks Microprogramming Computer input-output equipment Computational Mathematics and Numerical Analysis Theory of Computation Computer Engineering and Networks Control Structures and Microprogramming Input/Output and Data Communications Computer Communication Networks
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Nota di contenuto	COMBS: First Open-Source based Benchmark Suite for Multi-Physics Simulation Relevant HPC Research -- Efficient Sorting and Join on NVM-Based Hybrid Memory -- Parallel SCC Detection Based on Reusing Warps and Coloring Partitions on GPUs -- Procedure and Loop Level Speculative Parallelism Analysis in HPEC -- CTA: A Critical Task Aware Scheduling Mechanism for Dataflow Architecture -- An Adaptive Thread Partitioning Approach in Speculative Multithreading -- PMC-based dynamic adaptive CPU and DRAM power modeling -- A Multi-threaded

Algorithm for Capacity Constrained Assignment over Road Networks -- A Dynamic Scheduling Strategy of ADMM Sub-problem Optimization Algorithm Based on Hierachical Structure -- An Improved Heterogeneous Dynamic List Schedule Algorithm -- FastThetaJoin: An Optimization on Multi-way Data Stream θ-join with Range Constraints -- A Distributed Framework for Online Stream Data Clustering -- End-System Aware Large File Transfer Solution for Rich Media Applications over 5G Mobile Networks -- Broad Learning System with Proportional-Integral-Differential Gradient Descent -- Accelerating De Novo Assembler WTDBG2 on Commodity Servers -- Typing Everywhere With EMG Keyboard: A Novel Myo Armband-based HCI Tool -- Accelerating Pattern Matching on Intel Xeon Phi Processors -- Redistributing and Optimizing High-Resolution Ocean Model POP2 to Million Sunway Cores -- Performance Optimization for Feature Extraction Section of DeepChem -- Principal Component Analysis Based Fingerprint Positioning -- Priority Based Service Placement Strategy in Heterogeneous Mobile Edge Computing -- VTC: a scheduling framework between soft real-time and hard real-time on multimedia OS -- A BSP Based Approach For NFAs Intersection -- Tight Bound of Parallel Request Latency for Erasure-Coded Distributed Storage System -- High-Performance Simulations on GPUs using Adaptive Time Steps -- Performance Modeling of Stencil Computation on SW26010 Processors -- Optimizing B+-Tree Searches on coupled CPU-GPU architectures -- OCVM: Optimizing the Isolation of Virtual Machines with Open-Channel SSDs -- CANRT: A Client-Active NVM-based Radix Tree for Fast Remote Access -- Distributed and Parallel Ensemble Classification for Big Data Based on Kernel Density Estimation and Random Sample Partition -- SWAF: A Distributed Solar WSN Adaptive Framework -- Formalizing and Verifying Decentralized Systems with Extended Concurrent Separation Logic -- PRIAG: Proximal Reweighted Incremental Aggregated Gradient Algorithm for Distributed Optimizations -- Decentralized Expectation Maximization Algorithm -- Towards a Deep-pipelined Architecture for Accelerating Deep GCN on a Multi-FPGA Platform -- Linear Scalability from Sharding and PoS -- Tree2tree Structural Language Modeling for Compiler Fuzzing -- Research and Design of Distribution Equipment Health Early Warning System -- Parallel Processing Algorithms for the Vehicle Routing Problem and its Variants: A Literature Review with a Look into the Future -- Multi-Scaled Non-Local Means Parallel Filters for Medical Image Denoising -- Optimized HybridSketch: More Efficient with Analysis and Algorithm -- An Overlapping Community Detection Algorithm based on Triangle Reduction Weighted for Large-scale Complex Network -- Parallel Belief Propagation Optimized by Coloring on GPUs -- A Multiplatform Parallel Approach for Lattice Sieving Algorithms -- Effect of Evaporation on Aggregation Kinetics of Clusters: A Monte Carlo Simulation Study -- Processing in Memory Assisted MEC 3C Resource Allocation for Computation Offloading -- Beacons Selection Based Localization in Wireless Sensor Networks -- A Periodic Variable Star Observation System with High Accuracy Based on Star Sensors.

Sommario/riassunto

This three-volume set LNCS 12452, 12453, and 12454 constitutes the proceedings of the 20th International Conference on Algorithms and Architectures for Parallel Processing, ICA3PP 2020, in New York City, NY, USA, in October 2020. The total of 142 full papers and 5 short papers included in this proceedings volumes was carefully reviewed and selected from 495 submissions. ICA3PP is covering the many dimensions of parallel algorithms and architectures, encompassing fundamental theoretical approaches, practical experimental projects,

and commercial components and systems. As applications of computing systems have permeated in every aspects of daily life, the power of computing system has become increasingly critical. This conference provides a forum for academics and practitioners from countries around the world to exchange ideas for improving the efficiency, performance, reliability, security and interoperability of computing systems and applications. ICA3PP 2020 focus on two broad areas of parallel and distributed computing, i.e. architectures, algorithms and networks, and systems and applications.