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Collana	Theoretical Computer Science and General Issues, , 2512-2029 ; ; 10778
Disciplina	004.35
Soggetti	Software engineering Computer engineering Computer networks Computer programming Logic design Artificial intelligence Computer science Software Engineering Computer Engineering and Networks Programming Techniques Logic Design Artificial Intelligence Theory of Computation
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Workshop on Models, Algorithms and Methodologies for Hybrid Parallelism in New HPC Systems -- An experience report on (auto-) tuning of mesh-based PDE solvers on shared memory systems -- Using GPGPU accelerated interpolation algorithms for marine bathymetry processing with on-premises and cloud based computational resources

-- Relaxing the correctness conditions on concurrent data structures for multicore CPUs. A numerical case study -- Energy analysis of a 4D Variational Data Assimilation algorithm and evaluation on ARM-based HPC systems -- Performance Assessment of the Incremental Strong Constraints 4DVAR Algorithm in ROMS -- Evaluation of HCM: a New Model to Predict the Execution Time of Regular Parallel Applications on a Heterogeneous Cluster -- Workshop on Power and Energy Aspects of Computations (PEAC 2017) -- Applicability of the Empirical Mode Decomposition for Power Traces of Large-Scale Applications -- Efficiency analysis of Intel, AMD and Nvidia 64-bit hardware for memory-bound problems: a case study of ab initio calculations with VASP 75 -- GPU Power Modeling of HPC Applications for the Simulation of Heterogeneous Clouds -- Bi-cluster Parallel Computing in Bioinformatics – Performance and Eco-efficiency -- Performance and energy analysis of scientific workloads executing on LPSoCs -- Energy efficient dynamic load balancing over multiGPU heterogeneous systems -- Workshop on Scheduling for Parallel Computing (SPC 2017) -- Scheduling Data Gathering with Maximum Lateness Objective -- Fair Scheduling in Grid VOs with Anticipation Heuristic -- A Security-Driven Approach to Online Job Scheduling in IaaS Cloud Computing Systems -- Dynamic Load Balancing Algorithm for Heterogeneous Clusters -- Multi-Objective Extremal Optimization in Processor Load Balancing for Distributed Programs -- Workshop on Language-Based Parallel Programming Models (WLPP 2017) -- Pardis: A Process Calculus for Parallel and Distributed Programming in Haskell -- Towards High-Performance Python.-Actor Model of a New Functional Language – Anemone -- Almost Optimal Column-wise Prefix-sum Computation on the GPU -- A Combination of Intra- and Inter-Place Work Stealing for the APGAS Library -- Benchmarking Molecular Dynamics with OpenCL on Many-Core Architectures -- Efficient Language-Based Parallelization of Computational Problems Using Cilk Plus -- A Taxonomy of Task-Based Technologies for High-Performance Computing -- Workshop on PGAS Programming -- Interoperability of GASPI and MPI in Large Scale Scientific Applications -- Evaluation of the parallel performance of the Java and PCJ on the Intel KNL based systems -- Fault-tolerance mechanisms for the Java parallel codes implemented with the PCJ library -- Exploring graph analytics with the PCJ toolbox -- Big Data analytics in Java with PCJ library: performance comparison with Hadoop -- Performance comparison of graph BFS implemented in MapReduce and PGAS programming models.-Minisymposium on HPC Applications in Physical Sciences -- Efficient Parallel Generation of Many-Nucleon Basis for Large-Scale AbInitio Nuclear Structure Calculations -- Parallel Exact Diagonalization Approach to Large Molecular Nanomagnets Modelling -- Application of Numerical Quantum Transfer-matrix Approach in the Randomly Diluted Quantum Spin Chains -- Minisymposium on High Performance Computing Interval Methods -- A new method for solving nonlinear interval and fuzzy equations -- Role of hull-consistency in the HIBA USNE multithreaded solver for nonlinear systems -- Parallel computing of linear systems with linearly dependent intervals in MATLAB -- What Decision to Make In a Conflict Situation under Interval Uncertainty: Efficient Algorithms for the Hurwicz Approach -- Practical Need for Algebraic (Equality-Type) Solutions of Interval Equations and for Extended-Zero Solutions -- Workshop on Complex Collective Systems -- Application of Local Search with Perturbation Inspired by Cellular Automata for Heuristic Optimization of Sensor Network Coverage Problem -- A Fuzzy Logic Inspired Cellular Automata Based Model for Simulating Crowd Evacuation Processes -- Nondeterministic Cellular Automaton for

Modelling Urban Traffic with Self-organizing Control -- Towards Multi-Agent simulations accelerated by GPU -- Tournament-Based Convection Selection in Evolutionary Algorithms -- Multi-agent systems programmed visually with Google Blockly.

Sommario/riassunto

The two-volume set LNCS 10777 and 10778 constitutes revised selected papers from the 12th International Conference on Parallel Processing and Applied Mathematics, PPAM 2017, held in Lublin, Poland, in September 2017. The 49 regular papers presented in the proceedings were selected from 98 submissions. For the workshops and special sessions, that were held as integral parts of the PPAM 2017 conference, a total of 51 papers was accepted from 75 submissions. The papers were organized in topical sections named as follows: Part I: numerical algorithms and parallel scientific computing; particle methods in simulations; task-based paradigm of parallel computing; GPU computing; parallel non-numerical algorithms; performance evaluation of parallel algorithms and applications; environments and frameworks for parallel/distributed/cloud computing; applications of parallel computing; soft computing with applications; and special session on parallel matrix factorizations. Part II: workshop on models, algorithms and methodologies for hybrid parallelism in new HPC systems; workshop power and energy aspects of computations (PEAC 2017); workshop on scheduling for parallel computing (SPC 2017); workshop on language-based parallel programming models (WLPP 2017); workshop on PGAS programming; minisymposium on HPC applications in physical sciences; minisymposium on high performance computing interval methods; workshop on complex collective systems.