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Preface of the European Workshop on Quantum Computing for High-Performance Computing -- Hybrid Quantum Computing: the Use Case of Shor's Algorithm -- A Quantum Emulation Workbench for Benchmark Construction and Application Development -- TNBS: A Kernel-Based Benchmarking for Digital Quantum Computers -- Variational Quantum Eigensolver for Classification in Distributed Data Sets -- LazyQML: A Python library to benchmark Quantum Machine Learning models -- Optimizing a quantum BCD Adder in terms of T-gates and CNOT gates -- Factoring integers via Schnorr's algorithm assisted with VQE -- Adiabatic training for Variational Quantum Algorithms -- Quantum Compilation Process: a Survey -- 19th International Workshop on Virtualization in High-Performance Cloud Computing (VHPC 2024) -- An Investigation of the Linux Virtual Networking Latencies -- Performance Implications of SEV Virtual Machine Live Migration -- Boosting Serverless Computing: A Survey on Architecture Designs and Accelerator Support for Serverless Platforms -- LLMs for Virtualized Networking Infrastructures: An Industrial Report -- Towards Using Partitioned GPU Virtual Functions for Mixture of Experts -- International Workshop in High-Performance Computing in Physics (PHYSHPC) -- Runtime Instantiation of Kernels for Fast Fourier Transforms Using SYCL Specialization Constants -- Towards Large-scale Top-Down Microarchitecture Analysis Using the Score-P Framework -- Coalescing MPI communication in 6D Vlasov simulations: solving ghost domains in Vlasiator -- Understanding the Impact of openPMD on BIT1, a Particle-in-Cell Monte Carlo Code, through Instrumentation, Monitoring, and In-Situ Analysis -- Workshop proceedings -- Lessons Learned and Scalability Achieved When Porting Uintah to DOE Exascale Systems -- Evaluating AI-generated code for C++, Fortran, Go, Java, Julia, Matlab, Python, R, and Rust -- Investigating the Performance Difference of Task Communication via Futures or Side Effects -- GVEL: Fast Graph Loading in Edgelist and Compressed Sparse Row (CSR) formats -- Workshop preface -- Dynamic Resource Manager for Automating Deployments in the Computing Continuum -- Parallel Efficiency-aware Standard MPI-based Malleability -- The Impact of Evolving APGAS Programs on HPC Clusters -- Malleability in the Expand Ad-Hoc parallel file system -- Evaluation of a Dynamic Resource Management Strategy for Elastic Scientific Workflows -- MaM: A User-Friendly Interface to Incorporate Malleability into MPI Applications -- Towards a Scale Invariant Syntax for Dynamic Job-Level Workflows -- 22nd International Workshop on Algorithms, Models, and Tools for Parallel Computing on Heterogeneous Platforms (HeteroPar 2024) -- StarONNX: a Scheduler for Efficient Inference on Heterogeneous Resources -- Strategies for memory management improvement in deep learning algorithms for contrast enhancement of high-resolution radiological images -- Computing DTWs on CPU, GPU and FPGA with SYCL -- Challenging Portability Paradigms: FPGA Acceleration Using SYCL and OpenCL -- A Practical Survey on Static Task Scheduling Optimization Approaches for Heterogeneous Architectures -- Element scheduling for GPU-accelerated finite-volumes computations -- Containerization for Heterogeneous and Hybrid Parallelism -- A Chapel-based Multi-GPU Branch-and-Bound Algorithm -- Accelerating Scientific Computing Kernels by Fusing the Polyhedral and Tensor Compilers -- Exploring the Limits of Cross-Platform Sparse Tensor Processing.

The two-volume set LNCS 15385 + 15386 constitutes the proceedings of the workshops and associated events that were held in conjunction with the 30th European Conference on Parallel and Distributed Processing, Euro-Par 2024, which took place in Madrid, Spain, during

August 26–30, 2024. Overall, the Euro-Par Workshops received a total of 84 submissions of which 60 were accepted for presentation. They stem from the following workshops: – The 1st European Workshop on Quantum Computing for High-Performance Computing (EUROQHPC 2024) – The 19th Workshop on Virtualization in High-Performance Cloud Computing (VHPC 2024) – The 1st Workshop in High-Performance Computing in Physics (PHYSHPC 2024) – The 4th Workshop on Asynchronous Many-Task Systems for Exascale (AMTE 2024) – The 3rd EuroHPC Workshop on Dynamic Resources in HPC (DYNRESHPC 2024) – The 22nd International Workshop on Algorithms, Models and Tools for Parallel Computing on Heterogeneous Platforms (HETEROPAR 2024) – The 1st Workshop on Next Steps in IoT-Edge-Cloud Continuum Evolution: Research and Practice (IECCONT 2024) – The 1st Workshop about High-Performance e-Science (HIPES 2024) – The 2nd International Workshop on Scalable Compute Continuum (WSCC 2024) In addition, the proceedings contain 14 poster and demo papers that have been accepted from 30 submissions, and 18 contributions in the PhD Symposium track that were accepted from 22 submissions. .

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