1. Record Nr. UNINA9910544850703321

Titolo	Languages and Compilers for Parallel Computing : 33rd International Workshop, LCPC 2020, Virtual Event, October 14-16, 2020, Revised Selected Papers / / edited by Barbara Chapman, José Moreira
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2022
ISBN	3-030-95953-8
Edizione	[1st ed. 2022.]
Descrizione fisica	1 online resource (233 pages)
Collana	Theoretical Computer Science and General Issues, , 2512-2029 ; ; 13149
Disciplina	004.35 005.275
Soggetti	Programming languages (Electronic computers) Computer networks Computer programming Computer systems Programming Language Computer Communication Networks Programming Techniques Computer System Implementation
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Code and Data Transformations An Affine Scheduling Framework for Integrating Data Layout and Loop Transformations -- Guiding Code Optimizations with Deep Learning-Based Code Matching -- Expanding Opportunities for Array Privatization in Sparse Computations -- OpenMP and Fortran Concurrent Execution of Deferred OpenMP Target Tasks with Hidden Helper Threads -- Using Hardware Transactional Memory to Implement Speculative Privatization in OpenMP -- Improving Fortran Performance Portability -- Domain Specific Compilation COMET: A Domain-Specic Compilation of High-Performance Computational Chemistry -- G-Code Re-compilation and Optimization for Faster 3D Printing -- Li Machine Language and Quantum Computing Optimized Code Generation for Deep Neural

Networks -- Thermal-Aware Compilation of Spiking Neural Networks to Neuromorphic Hardware -- A Quantum-Inspired Model For Bit-Serial SIMD-Parallel Computation -- Performance Analysis Enhancing the Top-Down Microarchitectural Analysis Method Using Purchasing Power Parity Theory -- Code Generation Cain: Automatic Code Generation for Simultaneous Convolutional Kernels on Focal-plane Sensor-processors -- Reordering Under the ECMAScript Memory Consistency Model -- Verication of Vectorization of Signal Transforms.

Sommario/riassunto

This book constitutes the thoroughly refereed post-conference proceedings of the 33rd International Workshop on Languages and Compilers for Parallel Computing, LCPC 2020, held in Stony Brook, NY, USA, in October 2020. Due to COVID-19 pandemic the conference was held virtually. The 15 revised full papers were carefully reviewed and selected from 19 submissions. The contributions were organized in topical sections named as follows: Code and Data Transformations; OpenMP and Fortran; Domain Specific Compilation; Machine Language and Quantum Computing; Performance Analysis; Code Generation.