

1. Record Nr.	UNISA996464538003316
Titolo	Languages and Compilers for Parallel Computing [[electronic resource]] : 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
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-Specific 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.
