1. Record Nr. UNINA9910357847203321

Titolo	Languages and Compilers for Parallel Computing : 31st International Workshop, LCPC 2018, Salt Lake City, UT, USA, October 9–11, 2018, Revised Selected Papers / / edited by Mary Hall, Hari Sundar
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2019
ISBN	3-030-34627-7
Edizione	[1st ed. 2019.]
Descrizione fisica	1 online resource (X, 193 p. 132 illus., 55 illus. in color.)
Collana	Theoretical Computer Science and General Issues, , 2512-2029 ; ; 11882
Disciplina	005.453 004.35
Soggetti	Compilers (Computer programs) Computer engineering Computer networks Computers Compilers and Interpreters Computer Engineering and Networks Computer Hardware
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	A Unified Approach to Variable Renaming for Enhanced Vectorization -- Design and Performance Analysis of Real-time Dynamic Streaming Applications -- A Similarity Measure for GPU Kernel Subgraph Matching -- New Opportunities for Compilers in Computer Security -- Footmark: A New Working Set Definition -- Towards an Achievable Performance for the Loop Nests -- Extending Index-Array Properties for Data Dependence Analysis -- Optimized Sound and Complete Data Race Detection in Structured Parallel Programs -- Compiler Optimizations for Parallel Programs -- MATE, a Unified Model for Communication-Tolerant Scientific Applications -- GASNet-EX: A High-Performance, Portable Communication Library for Exascale -- Nested Parallelism with Algorithmic Skeletons -- HDArray: Parallel Array Interface for Distributed Heterogeneous Devices -- Automating the Exchangeability

	of Shared Data Abstractions.
Sommario/riassunto	This book constitutes the thoroughly refereed post-conference proceedings of the 31st International Workshop on Languages and Compilers for Parallel Computing, LCPC 2018, held in Salt Lake City, UT, USA, in October 2018. The 14 revised full papers were carefully reviewed and selected from 26 submissions. Specific topics are compiling for parallelism and parallel compilers, static, dynamic, and adaptive optimization of parallel programs, parallel programming models and languages, formal analysis and verification of parallel programs, parallel runtime systems and libraries, performance analysis and debugging tools for concurrency and parallelism, parallel algorithms and concurrent data structures, parallel applications, synchronization and concurrency control, software engineering for parallel programs, fault tolerance for parallel systems, and parallel programming and compiling for heterogeneous systems.