

1. Record Nr.	UNINA9910739479003321
Titolo	Languages and Compilers for Parallel Computing : 25th International Workshops, LCPC 2012, Tokyo, Japan, September 11-13, 2012, Revised Selected Papers / / edited by Hironori Kasahara, Keiji Kimura
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2013
ISBN	3-642-37658-4
Edizione	[1st ed. 2013.]
Descrizione fisica	1 online resource (XII, 276 p. 101 illus.)
Collana	Theoretical Computer Science and General Issues, , 2512-2029 ; ; 7760
Disciplina	004.35
Soggetti	Compilers (Computer programs) Computer programming Software engineering Operating systems (Computers) Image processing - Digital techniques Computer vision Compilers and Interpreters Programming Techniques Software Engineering Operating Systems Computer Imaging, Vision, Pattern Recognition and Graphics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di contenuto	Invited Talk -- Just in Time Load Balancing -- Workshop Papers -- AlphaZ: A System for Design Space Exploration in the Polyhedral Model -- Compiler Optimizations: Machine Learning versus O3 -- The STAPL Parallel Graph Library -- Set and Relation Manipulation for the Sparse Polyhedral Framework -- Parallel Clustered Low-Rank Approximation of Graphs and Its Application to Link Prediction -- OmpSs-OpenCL Programming Model for Heterogeneous Systems -- Compiler Optimizations for Industrial Unstructured Mesh CFD Applications on GPUs -- UCIFF: Unified Cluster Assignment Instruction Scheduling and Fast Frequency Selection for Heterogeneous Clustered VLIW Cores -- A Study on the Impact of Compiler Optimizations on High-Level Synthesis

-- FlowPools: A Lock-Free Deterministic Concurrent Dataflow Abstraction -- Task Parallelism and Data Distribution: An Overview of Explicit Parallel Programming Languages -- A Fast Parallel Graph Partitioner for Shared-Memory Inspector/Executor Strategies -- A Software-Based Method-Level Speculation Framework for the Java Platform -- Ant: A Debugging Framework for MPI Parallel Programs -- Compiler Automatic Discovery of OmpSs Task Dependencies -- Beyond Do Loops: Data Transfer Generation with Convex Array Regions -- Workshop Posters -- Finish Accumulators: An Efficient Reduction Construct for Dynamic Task Parallelism -- FlashbackSTM: Improving STM Performance by Remembering the Past -- Kaira: Generating Parallel Libraries and Their Usage with Octave -- Language and Architecture Independent Software Thread-Level Speculation -- Abstractions for Defining Semi-Regular Grids Orthogonally from Stencils.

Sommario/riassunto

This book constitutes the thoroughly refereed post-conference proceedings of the 25th International Workshop on Languages and Compilers for Parallel Computing, LCPC 2012, held in Tokyo, Japan, in September 2012. The 16 revised full papers, 5 poster papers presented with 1 invited talk were carefully reviewed and selected from 39 submissions. The focus of the papers is on following topics: compiling for parallelism, automatic parallelization, optimization of parallel programs, formal analysis and verification of parallel programs, parallel runtime systems, task-parallel libraries, parallel application frameworks, performance analysis tools, debugging tools for parallel programs, parallel algorithms and applications.
