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Disciplina	004.35
Soggetti	Compilers (Computer programs) Microprogramming Computer input-output equipment Computers, Special purpose Computer systems Compilers and Interpreters Control Structures and Microprogramming Input/Output and Data Communications Special Purpose and Application-Based Systems Computer System Implementation Compiladors (Programes d'ordinador) Sistemes informàtics Equip perifèric Congressos Llibres electrònics
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	-- Current and Future OpenMP Optimization. -- Towards Locality-Aware Host-to-Device Offloading in OpenMP. -- Performance Porting the ExaStar Multi-physics App Thornado On Heterogeneous Systems - A Fortran-OpenMP Code-base Evaluation. -- Event-Based OpenMP

Tasks for Time-Sensitive GPU-Accelerated Systems. -- Targeting More Devices. -- Integrating Multi-FPGA Acceleration to OpenMP Distributed Computing. -- Towards a Scalable and Efficient PGAS-based Distributed OpenMP. -- Multilayer Multipurpose Caches for OpenMP Target Regions on FPGAs. -- Best Practices. -- Survey of OpenMP Practice in General Open Source Software. -- CI/CD Efforts for Validation, Verification and Benchmarking OpenMP Implementations. -- Evaluation of Directive-based Programming Models for Stencil Computation on Current GPGPU Architectures. -- Tools. -- Finding Equivalent OpenMP Fortran and C/C++ Code Snippets Using Large Language Models. -- Visualizing Correctness Issues in OpenMP Programs. -- Developing an Interactive OpenMP Programming Book with Large Language Models. -- Simplifying Parallelization. -- Automatic Parallelization and OpenMP Offloading of Fortran Array Notation. -- Detrimental Task Execution Patterns in Mainstream OpenMP Runtimes.

Sommario/riassunto

This book constitutes the refereed proceedings of the 20th International Workshop on OpenMP: Advancing OpenMP for Future Accelerators, IWOMP 2024, in Perth, WA, Australia, during September 23–25, 2024. The 14 full papers presented in this book were carefully reviewed and selected from 16 submissions. They are grouped into the following topics: current and future openMP optimization; targeting more devices; best practices; tools; and simplifying parallelization.
