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Soggetti	Microprocessors Computer architecture Logic design Computer programming Compilers (Computer programs) Operating systems (Computers) Processor Architectures Logic Design Programming Techniques Compilers and Interpreters Operating Systems
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Nota di contenuto	Synchronization and Data -- Improving Speculative taskloop in Hardware Transactional Memory -- Vectorized Barrier and Reduction in LLVM OpenMP Runtime -- Tasking Extensions I -- Enhancing OpenMP Tasking Model: Performance and Portability -- OpenMP Taskloop Dependences -- Applications -- Outcomes of OpenMP Hackathon: OpenMP Application Experiences with the Offloading Model (Part I) -- Outcomes of OpenMP Hackathon: OpenMP Application Experiences with the Offloading Model (Part II) -- An empirical investigation of OpenMP based implementation of Simplex Algorithm -- Task inefficiency patterns for a wave equation solver -- Case Studies -- Comparing

OpenMP Implementations With Applications Across A64FX Platforms -- A Case Study of LLVM-Based Analysis for Optimizing SIMD Code Generation -- Heterogenous Computing and Memory -- Experience Report: Writing A Portable GPU Runtime with OpenMP 5.1 -- FOTV: A generic device offloading framework for OpenMP -- Beyond Explicit Transfers: Shared and Managed Memory in OpenMP -- Tasking Extensions II -- Communication-Aware Task Scheduling Strategy in Hybrid MPI+OpenMP Applications -- An OpenMP Free Agent threads implementation.

Sommario/riassunto

This book constitutes the proceedings of the 17th International Workshop on OpenMP, IWOMP 2021, held virtually in September 2021 and hosted by the High Performance Computing research group at the University of Bristol, UK. The 15 full papers presented in this volume were carefully reviewed and selected for inclusion in this book. The papers are organized in topical sections named: synchronization and data; tasking expansions; applications; case studies; and heterogenous computing and memory. Chapter ‘FOTV: A Generic Device Offloading Framework for OpenMP’ is available open access under a Creative Commons Attribution 4.0 International License via link.springer.com.