

1. Record Nr.	UNINA9910743696103321
Autore	McIntosh-Smith Simon
Titolo	OpenMP: Advanced Task-Based, Device and Compiler Programming : 19th International Workshop on OpenMP, IWOMP 2023, Bristol, UK, September 13–15, 2023, Proceedings / / edited by Simon McIntosh- Smith, Michael Klemm, Bronis R. de Supinski, Tom Deakin, Jannis Klinkenberg
Pubbl/distr/stampa	Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2023
ISBN	9783031407444 303140744X
Edizione	[1st ed. 2023.]
Descrizione fisica	1 online resource (244 pages)
Collana	Lecture Notes in Computer Science, , 1611-3349 ; ; 14114
Altri autori (Persone)	KlemmMichael De SupinskiBronis R DeakinTom KlinkenbergJannis
Disciplina	005.275
Soggetti	Microprocessors Computer architecture Compilers (Computer programs) Microprogramming Computer input-output equipment Computers, Special purpose Computer systems Processor Architectures Compilers and Interpreters Control Structures and Microprogramming Input/Output and Data Communications Special Purpose and Application-Based Systems Computer System Implementation
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	OpenMP and AI: Advising OpenMP Parallelization via a Graph-Based Approach with Transformers -- Towards Effective Language Model

Application in High-Performance Computing -- OpenMP Advisor: A Compiler Tool for Heterogeneous Architectures -- Tasking Extensions: Introducing Moldable Task in OpenMP -- Suspending OpenMP Tasks on Asynchronous Events: Extending the Taskwait Construct -- How to Efficiently Parallelize Irregular DOACROSS Loops Using Fine-Grained Granularity and OpenMP Tasks? The mcf Case -- OpenMP Offload Experiences: The Kokkos OpenMPTarget Backend: Implementation and Lessons Learned -- Fine-Grained Parallelism on GPUs Using OpenMP Target Offloading -- Improving a Multigrid Poisson Solver with Peer-to-Peer Communication and Task Dependencies -- Beyond Explicit GPU Support: Multipurpose Cacheing to accelerate OpenMP Target Regions on FPGAs -- Generalizing Hierarchical Parallelism -- Exploring the Limits of Generic Code Execution on GPUs via Direct (OpenMP) Offload -- OpenMP Infrastructure and Evaluation: Improving Simulations of Task-Based Applications on Complex NUMA Architectures -- Experimental Characterization of OpenMP Offloading Memory Operations and Unified Shared Memory Support -- OpenMP Reverse Offloading Using Shared Memory Remote Procedure Calls.

---

### Sommario/riassunto

This book constitutes the proceedings of the 19th International Workshop on OpenMP, IWOMP 2023, held in Bristol, UK, during September 13–15, 2023. The 15 full papers presented in this book were carefully reviewed and selected from 20 submissions. The papers are divided into the following topical sections: OpenMP and AI; Tasking Extensions; OpenMP Offload Experiences; Beyond Explicit GPU Support; and OpenMP Infrastructure and Evaluation.

---