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Nota di contenuto	- A Task-parallel Pipeline Programming Model with Token Dependency. -- Dynamic Resource Management: Comparison of Asynchronous Many-Task (AMT) and Dynamic Processes with PSets (DPP). -- Closing a Source Complexity Gap between Chapel and HPX. -- Fail-stop Failure Protection for Coordinated Work Stealing of Tasks that Communicate through Futures. -- Futures in Task Graphs – Extending Taskflow With Dynamic Data Dependencies. -- Adaptively Optimizing the Performance of HPX's Parallel Algorithms. -- GPRat: Gaussian Process Regression with Asynchronous Tasks. -- Supporting OpenMP Free Agents by Leveraging the nOS-V Threading Library. -- Analyzing Data Sparsity in Global and Compact Support Radial Basis Functions for 3D Unstructured Mesh Deformation. -- Scalable Block-Sparse Matrix Multiplication Using Template Task Graphs. -- Type-level invariants for SPMD programming with Rust. -- Comparing and Contrasting User and Runtime Directed Data Placement Strategies for Owner-Compute, Multi-Accelerator Distributed Task Based Scheduling. -- Toward

Portable GPU Performance: Julia Recursive Implementation of TRMM and TRSM. -- Contemplating a Lightweight Communication Interface for Asynchronous Many-Task Systems. -- Leveraging Hardware-Aware Computation in Mixed-Precision Matrix Multiply: A Tile-Centric Approach.

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#### Sommario/riassunto

This book constitutes the refereed proceedings of the Third International Workshop on Asynchronous Many-Task Systems and Applications, WAMTA 2025, held in St. Louis, Missouri, USA during February 19–21, 2025. The 13 full papers and 2 short papers included in this book were carefully reviewed and selected from 18 submissions. The WAMTA 2025 conference proceedings help developers, users, and proponents of these models and systems share experience, discuss how they meet the challenges posed by Exascale system architectures, and explore opportunities for increased performance, robustness, productivity, and full-system utilization.

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