


# WORKSHOP ON ASYNCHRONOUS MANY-TASK SYSTEMS FEBRUARY 2025

WEDNESDAY	THURSDAY	FRIDAY
<p><i>Day 1</i> <span style="float: right;">19</span></p> <p>Registration Coffee and Pastries 8:00 AM-8:45 AM Welcoming Remarks 8:45 AM-9:00 AM</p> <hr/> <p>Keynote I: Improving the HPC experience, did Julia get it right or will AI hide the problem (or both)? 9:00 AM-10:00 AM</p> <hr/> <p>Coffee 10:00 AM-10:30 AM</p> <hr/> <p>Contemplating a Lightweight Communication Interface for Asynchronous Many-Task Systems 10:30 AM-11:00 AM</p> <hr/> <p>Comparing and Contrasting User and Runtime Directed Data Placement Strategies for Owner-Compute, Multi-Accelerator Distributed Task Based Scheduling 11:00 AM-11:30 AM</p> <hr/> <p>Chplx an Asynchronous Many Task Runtime Foundation for Chapel 11:30 AM-12:00 PM</p> <hr/> <p>Lunch  12:00 PM-1:00 PM</p> <hr/> <p>Supporting OpenMP Free Agents by Leveraging the nOS-V Threading Library 1:00 PM-1:30 PM</p> <hr/> <p>Futures in Task Graphs  Extending Taskflow With Dynamic Data Dependencies 1:30 PM-2:00 PM</p> <hr/> <p>Adaptively Optimizing the Performance of HPX's Parallel Algorithms 2:00 PM-2:30 PM</p> <hr/> <p>Coffee 2:30 PM-3:00 PM</p> <hr/> <p>Fail-stop Failure Protection for Coordinated Work Stealing of Tasks that Communicate through Futures 3:00 PM-3:30 PM</p> <hr/> <p>Q-IRIS: The Evolution of the IRIS Task-Based Runtime to Enable Classical-Quantum Workflows 3:30 PM-4:00 PM</p> <hr/> <p><i>Discussion: Integration with other standards</i> 4:00 PM-4:30 PM</p> <hr/> <p>Banquet on Campus 5:30 PM-8:00 PM</p> <hr/>	<p><i>Day 2</i> <span style="float: right;">20</span></p> <p>Registration Coffee and Pastries 8:00 AM-8:55 AM WAMTA'26 Preview 8:55 AM-9:00 AM</p> <hr/> <p>Keynote II: Task-Graphs: Why aren't we all using them? 9:00 AM-10:00 AM</p> <hr/> <p>Coffee 10:00 AM-10:30 AM</p> <hr/> <p>Type-level invariants for SPMD programming with Rust 10:30 AM-11:00 AM</p> <hr/> <p>Comparing Kernel Fusion Strategies with SYCL 11:00 AM-11:30 AM</p> <hr/> <p>Dynamic Resource Management: Comparison of Asynchronous Many-Task (AMT) and Dynamic Processes with PSets (DPP) 11:30 AM-12:00 PM</p> <hr/> <p>Lunch &amp; Poster session 12:00 PM-1:00 PM</p> <hr/> <p>Unifying the Architecture and Implementation of Task-Aware Libraries 1:00 PM-1:30 PM</p> <hr/> <p>Data Sparsity in Global and Compact Support Radial Basis Functions for 3D Unstructured Mesh Deformation 1:30 PM-2:00 PM</p> <hr/> <p>A Task-parallel Pipeline Programming Framework with Token Dependency 2:00 PM-2:30 PM</p> <hr/> <p>Coffee 2:30 PM-3:00 PM</p> <hr/> <p>GPRat: Gaussian Process Regression with Asynchronous Tasks 3:00 PM-3:30 PM</p> <hr/> <p>Julia-Unified Recursive Implementation of TRMM and TRSM for GPU Acceleration 3:30 PM-4:00 PM</p> <hr/> <p><i>Discussion: AI</i> 4:00 PM-4:30 PM</p> <hr/> <p>TBA 5:30 PM-8:00 PM</p> <hr/>	<p><i>Day 3</i> <span style="float: right;">21</span></p> <p>Registration Coffee and Pastries 8:00 AM-9:00 AM</p> <hr/> <p>Keynote III: Chaos to Cosmos: Orchestrating Complex Scientific Applications with Dynamic Runtime Systems 9:00 AM-10:00 AM</p> <hr/> <p>Coffee 10:00 AM-10:30 AM</p> <hr/> <p>Scalable Block-Sparse Matrix Multiplication Using Template Task Graphs 10:30 AM-11:00 AM</p> <hr/> <p>Leveraging Hardware-Aware Computation in Mixed-Precision Matrix Multiply: A Tile-Centric Approach 11:00 AM-11:30 AM</p> <hr/> <p>Panel discussion: SWOT 11:30 AM-12:00 PM</p> <hr/> <p>Lunch 12:00 PM-1:00 PM</p> <hr/>