

OpenMP Common Core

Learning parallelization of real applications from the ground-up



Manuel Arenaz | June 25, 2021

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Expected workshop learning outcomes

- **Learn how to decompose real codes into parallel patterns**
 - Have experience decomposing the hydrodynamics code LULESH (from the CORAL benchmark suite) into parallel patterns
- **Learn how to parallelize real codes using OpenMP**
 - Have experience parallelizing the hydrodynamics code LULESH
 - Have a practical step-by-step approach based on patterns for parallelizing any code
- **Learn best practices for parallel programming using OpenMP**

Agenda

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|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 14:00 - 14:15 | Setup and welcome participants |
| 14:15 - 14:30 | Overview |
| 14:35 - 15:45 | The OpenMP Common Core
The Parallelware Analyzer performance optimization report
Key technology differentiation: Code into patterns for parallelization
Using Parallelware Analyzer: A walk-through with MATMUL example |
| 15:45 - 16:15 | Coffee |
| 16:15 - 17:50 | Practicals: Use Parallelware Analyzer to parallelize PI and LULESHmk with OpenMP |
| 17:50 - 18:00 | Close |

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