

PRACE Autumn School 2016, Austria - Modern HPC Development for Scientists and Engineers

PRACE
AUTUMN
SCHOOL 2016
September 27-30, 2016
Hagenberg, Austria

Report of Contributions

Contribution ID: 8

Type: **not specified**

Parallel Programming - MPI

Wednesday, September 28, 2016 2:15 PM (1h 30m)

Primary author: Mr PONWEISER, Thomas (RISC Software GmbH)

Presenter: Mr PONWEISER, Thomas (RISC Software GmbH)

Session Classification: Module 2a - Parallel Programming

Track Classification: Parallel Programming

Contribution ID: 9

Type: **not specified**

Parallel Programming - OpenMP

Wednesday, September 28, 2016 10:15 AM (1h 30m)

Primary authors: Mr GRUBER, Bernhard (RISC Software GmbH); Mr HAVA, Michael (RISC Software GmbH)

Presenters: Mr GRUBER, Bernhard (RISC Software GmbH); Mr HAVA, Michael (RISC Software GmbH)

Session Classification: Module 2a - Parallel Programming

Track Classification: Parallel Programming

Contribution ID: **10**

Type: **not specified**

Intel Xeon Phi Programming

Wednesday, September 28, 2016 10:15 AM (1h 30m)

Primary author: Dr WEINBERG, Volker (LRZ)

Presenter: Dr WEINBERG, Volker (LRZ)

Session Classification: Module 2b - Intel Xeon Phi Programming

Track Classification: Intel Xeon Phi Programming

Contribution ID: **11**

Type: **not specified**

Parallel-IO

Thursday, September 29, 2016 10:15 AM (1h 30m)

Primary author: Dr MENDEZ, Sandra (LRZ)

Presenter: Dr MENDEZ, Sandra (LRZ)

Session Classification: Module 3a - Parallel IO

Track Classification: Parallel-IO

Contribution ID: 12

Type: **not specified**

PETSc

Thursday, September 29, 2016 10:15 AM (1h 30m)

Primary authors: Mr HORAK, David (VSB-TU Ostrava); Mr HAPLA, Vaclav (VSB-TU Ostrava)

Presenters: Mr HORAK, David (VSB-TU Ostrava); Mr HAPLA, Vaclav (VSB-TU Ostrava)

Session Classification: Module 3b - PETSc Tutorial

Track Classification: PETSc Tutorial

Contribution ID: **13**

Type: **not specified**

HPCToolkit

Friday, September 30, 2016 9:00 AM (1h 30m)

Primary author: Mr PONWEISER, Thomas (RISC Software GmbH)

Presenter: Mr PONWEISER, Thomas (RISC Software GmbH)

Session Classification: Module 4a - Tools for Performance Analysis

Track Classification: Tools for Performance Analysis

Contribution ID: 14

Type: **not specified**

IO-Profiling

Friday, September 30, 2016 10:45 AM (1h 30m)

Primary author: Dr MENDEZ, Sandra (LRZ)

Presenter: Dr MENDEZ, Sandra (LRZ)

Session Classification: Module 4a - Tools for Performance Analysis

Track Classification: Tools for Performance Analysis

Contribution ID: 15

Type: **not specified**

Advanced Parallel Programming

Friday, September 30, 2016 9:00 AM (1h 30m)

Primary author: Mr ALEXANDER, Leutgeb (RISC Software GmbH)

Presenter: Mr LEUTGEB, Alexander (RISC Software GmbH)

Session Classification: Module 4b - Advanced Parallel Programming

Track Classification: Advanced Parallel Programming

Contribution ID: 16

Type: **not specified**

Lattice Boltzmann methods on the way to exascale

Tuesday, September 27, 2016 10:00 AM (1 hour)

Primary author: Prof. RÜDE, Ulrich (Friedrich-Alexander Universität Erlangen-Nürnberg)

Presenter: Prof. RÜDE, Ulrich (Friedrich-Alexander Universität Erlangen-Nürnberg)

Session Classification: Keynote

Contribution ID: 17

Type: **not specified**

VR and visualisation in the context of HPC applications

Thursday, September 29, 2016 9:00 AM (1 hour)

Primary author: Dr ANTHES, Christoph (LRZ)

Presenter: Dr ANTHES, Christoph (LRZ)

Session Classification: Keynote

Contribution ID: 18

Type: **not specified**

Will we live to a zeta machine? - Development and implementation of scalable and energy efficient algorithms

Wednesday, September 28, 2016 9:00 AM (1 hour)

Primary author: Mr HORAK, David (VSB-TU Ostrava)

Presenter: Mr HORAK, David (VSB-TU Ostrava)

Session Classification: Keynote

Contribution ID: 19

Type: **not specified**

Direct numerical simulation of a compressible channel flow: Automatic code generation using computer algebra and parallel implementation in OpenMP

Tuesday, September 27, 2016 3:15 PM (30 minutes)

Primary author: Prof. MANHARTSGRUBER, Bernhard (Johannes Kepler University Linz)

Presenter: Prof. MANHARTSGRUBER, Bernhard (Johannes Kepler University Linz)

Session Classification: Presentations from Science and Industry

Contribution ID: 20

Type: **not specified**

High Performance Computing @ LRZ

Tuesday, September 27, 2016 11:15 AM (30 minutes)

With the 6.8 PFlop/s system SuperMUC the Leibniz Supercomputing Centre of the Bavarian Academy of Sciences and Humanities at Garching near Munich is operating one of the fastest supercomputers in the world. We give an overview of the HPC systems installed at LRZ, and describe services and research activities like HPC training and application enabling for current and future computer architectures.

Primary author: WEINBERG, Volker (LRZ)

Presenter: WEINBERG, Volker (LRZ)

Session Classification: Presentations from Science and Industry

Contribution ID: 21

Type: **not specified**

Open-Source DEM and CFD-DEM Simulations in an HPC Environment

Tuesday, September 27, 2016 2:45 PM (30 minutes)

Primary author: Dr GONIVA, Christoph (DCS Computing GmbH)

Presenter: Dr GONIVA, Christoph (DCS Computing GmbH)

Session Classification: Presentations from Science and Industry

Contribution ID: 22

Type: **not specified**

Toxicity Prediction using Deep Learning

Tuesday, September 27, 2016 11:45 AM (30 minutes)

Primary authors: Mr MAYR, Andreas (Johannes Kepler University Linz); Mr UNTERTHINER, Thomas (Johannes Kepler University Linz)

Presenters: Mr MAYR, Andreas (Johannes Kepler University Linz); Mr UNTERTHINER, Thomas (Johannes Kepler University Linz)

Session Classification: Presentations from Science and Industry