

PRACE Summer of HPC 2016

Report of Contributions

Contribution ID: 0

Type: **Lecture**

Shared-Memory Programming with OpenMP

Contribution ID: 1

Type: **Practical**

CUDA: task dependencies

Contribution ID: 2

Type: **Practical**

Practical: divide-and-conquer with Multisort in OpenMP

Contribution ID: 3

Type: **Lecture**

Hybrid MPI/OpenMP: practical matrix computation code

Contribution ID: 4

Type: **Practical**

A look into accelerators: CUDA advanced examples

Contribution ID: 5

Type: **Lecture**

MPI: Point-to-point communication, collective communication

Contribution ID: 6

Type: **Lecture**

MPI: Blocking and non-blocking communications

Contribution ID: 7

Type: **Practical**

Practical: Simple matrix computations in MPI

Contribution ID: 8

Type: **Lecture**

Introduction to parallel architectures, algorithms design and performance parameters

Tuesday, July 5, 2016 9:00 AM (45 minutes)

Session Classification: Ideas and Basics of Parallel Computing MPI: Introduction

Contribution ID: 9

Type: **Lecture**

Introduction to the MPI programming model

Tuesday, July 5, 2016 9:45 AM (45 minutes)

Session Classification: Ideas and Basics of Parallel Computing MPI: Introduction

Contribution ID: **10**

Type: **Practical**

MPI (Non-)Blocking P2P communication

Tuesday, July 5, 2016 11:00 AM (1h 30m)

Session Classification: Ideas and Basics of Parallel Computing MPI: Introduction

Contribution ID: 11

Type: **Lecture**

Introduction to 3D Scientific Visualisation

Primary author: Dr KOS, Leon (University of Ljubljana)

Presenter: Dr KOS, Leon (University of Ljubljana)

Contribution ID: 12

Type: **Lecture**

Visit overview

Primary author: Dr KOS, Leon (University of Ljubljana)

Presenter: Dr KOS, Leon (University of Ljubljana)

Contribution ID: 13

Type: **Practical**

Open Foam and ParaView

Presenter: Dr TELENTA, Marijo (UL)

Contribution ID: 14

Type: **Practical**

OpenGL programming

Primary author: Dr KOS, Leon (University of Ljubljana)

Presenter: Dr KOS, Leon (University of Ljubljana)

Contribution ID: 15

Type: **Lecture**

Introduction to OpenMP

Wednesday, July 6, 2016 8:30 AM (2 hours)

Session Classification: Introduction to OpenMP

Contribution ID: 16

Type: **Lecture**

OpenMP: Parallel regions and work sharing constructs

Contribution ID: 17

Type: **Lecture**

OpenMP: Synchronization mechanisms

Contribution ID: **18**

Type: **Practical**

OpenMP: parallel loops and regions, worksharing constructs

Wednesday, July 6, 2016 11:00 AM (1h 30m)

Session Classification: Introduction to OpenMP

Contribution ID: 19

Type: **Lecture**

Introduction to CUDA and GPUs

Contribution ID: 20

Type: **Practical**

Practical: CUDA through some very simple examples

Contribution ID: 21

Type: **not specified**

CUDA: understanding and predicting the potential of task decomposition strategies

Contribution ID: 22

Type: **not specified**

Tour of the JSC Supercomputer Facility

Monday, July 4, 2016 4:30 PM (1 hour)

Presenter: Dr HOMBERG, Willi (JSC)

Contribution ID: 23

Type: **not specified**

Supercomputer HowTo

Monday, July 4, 2016 5:30 PM (1h 30m)

hands-on. Login, ssh, remote editor etc.

Presenter: Dr KABADSHOW, Ivo (JSC)

Contribution ID: 24

Type: **not specified**

MPI: Blocking collective communication

Tuesday, July 5, 2016 1:30 PM (2h 30m)

Session Classification: Ideas and Basics of Parallel Computing MPI: Introduction

Contribution ID: 25

Type: **not specified**

MPI: Outlook (derived data types, communicators and groups, MPI I/O)

Tuesday, July 5, 2016 4:30 PM (2h 30m)

Session Classification: Ideas and Basics of Parallel Computing MPI: Introduction

Contribution ID: 26

Type: **not specified**

MPI+OpenMP Training + Hands-On

Wednesday, July 6, 2016 1:30 PM (3 hours)

Session Classification: Introduction to OpenMP

Contribution ID: 27

Type: **not specified**

Introduction to ParaView

Thursday, July 7, 2016 9:00 AM (3h 30m)

Presenter: Dr ZILKEN, Herwig (JSC)

Session Classification: Visualization (Paraview, Rotunda)

Contribution ID: 28

Type: **not specified**

In-Situ Visualization

Thursday, July 7, 2016 1:30 PM (5h 30m)

Presenter: Dr GOEBBERT, Jens Henrik (JSC)

Session Classification: Visualization (Paraview, Rotunda)