

PRACE Summer of HPC 2015



Report of Contributions

Contribution ID: 1

Type: **Lecture**

OpenMP: shared-memory programming models, fundamentals

Wednesday, July 1, 2015 2:00 PM (30 minutes)

Presenter: Dr MARTORELL, Xavier (BSC)

Session Classification: Shared-Memory Programming with OpenMP (1h30' lectures, 1h30' practical)

Contribution ID: 2

Type: **Lecture**

OpenMP: Parallel regions and work sharing constructs

Wednesday, July 1, 2015 2:30 PM (30 minutes)

Presenter: Dr MARTORELL, Xavier (BSC)

Session Classification: Shared-Memory Programming with OpenMP (1h30' lectures, 1h30' practical)

Contribution ID: 3

Type: **Lecture**

OpenMP: Synchronization mechanisms

Wednesday, July 1, 2015 3:00 PM (30 minutes)

Presenter: Dr MARTORELL, Xavier (BSC)

Session Classification: Shared-Memory Programming with OpenMP (1h30' lectures, 1h30' practical)

Contribution ID: 4

Type: **Practical**

Practical: Jacobi solver in heat diffusion in OpenMP

Wednesday, July 1, 2015 4:00 PM (1h 30m)

Presenters: NIETO, Diego (BSC); MIRANDA, Guillermo (BSC); Dr STRASSBURG, Janko (BSC); Dr MARTORELL, Xavier (BSC); TERUEL, Xavier (BSC)

Session Classification: Shared-Memory Programming with OpenMP (1h30' lectures, 1h30' practical)

Contribution ID: 5

Type: **Lecture**

MPI: Point-to-point communication, collective communication

Wednesday, July 1, 2015 9:30 AM (1 hour)

Presenter: Dr SUBOTIC, Vladimir (BSC)

Session Classification: Parallel Programming with MPI (2 h lectures, 1 h practical)

Contribution ID: 6

Type: **Lecture**

Introduction to 3D Scientific Visualisation

Friday, July 3, 2015 9:30 AM (1h 30m)

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

Presenter: Dr KOS, Leon (University of Ljubljana)

Session Classification: Visualisation training

Contribution ID: 7

Type: **Lecture**

VisIt overview

Friday, July 3, 2015 12:00 PM (1 hour)

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

Presenter: Dr KOS, Leon (University of Ljubljana)

Session Classification: Visualisation training

Contribution ID: 8

Type: **Practical**

Open Foam and ParaView

Friday, July 3, 2015 2:00 PM (1 hour)

Presenter: Dr TELENTA, Marijo (UL)

Session Classification: Visualisation training

Contribution ID: 9

Type: **Practical**

OpenGL programming

Friday, July 3, 2015 3:30 PM (1h 30m)

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

Presenter: Dr KOS, Leon (University of Ljubljana)

Session Classification: Visualisation training

Contribution ID: **10**

Type: **Lecture**

Shared-Memory Programming with OpenMP

Thursday, July 2, 2015 9:30 AM (30 minutes)

Presenter: Mr TERUEL, Xavier (BSC)

Session Classification: Shared-Memory Programming with OpenMP (1 h lecture, 2h practical)

Contribution ID: 11

Type: **Practical**

OpenMP/OmpSs: task dependencies

Thursday, July 2, 2015 10:00 AM (30 minutes)

Presenter: Mr MIRANDA, Guillermo (BSC)

Session Classification: Shared-Memory Programming with OpenMP (1 h lecture, 2h practical)

Contribution ID: 12

Type: **Practical**

Practical: divide-and-conquer with Multisort in OpenMP

Thursday, July 2, 2015 10:30 AM (2h 30m)

Presenter: Mr NIETO, Diego (BSC)

Session Classification: Shared-Memory Programming with OpenMP (1 h lecture, 2h practical)

Contribution ID: 13

Type: **Lecture**

Hybrid MPI/OpenMP: practical matrix computation code

Thursday, July 2, 2015 2:00 PM (1h 30m)

Presenters: Mr MIRANDA, Guillermo (BSC); Mr TERUEL, Xavier (BSC)

Session Classification: Hybrid Programming - MPI/OpenMP (2h lectures, 1h practical)

Contribution ID: 14

Type: **Practical**

A look into accelerators: CUDA through some very simple examples

Thursday, July 2, 2015 4:00 PM (1h 30m)

Presenter: Mr NIETO, Diego (BSC)

Session Classification: Hybrid Programming - MPI/OpenMP (2h lectures, 1h practical)

Contribution ID: 15

Type: **Lecture**

MPI: Blocking and non-blocking communications

Wednesday, July 1, 2015 10:30 AM (30 minutes)

Presenter: Dr SUBOTIC, Vladimir (BSC)

Session Classification: Parallel Programming with MPI (2 h lectures, 1 h practical)

Contribution ID: 16

Type: **Practical**

Practical: Simple matrix computations in MPI

Wednesday, July 1, 2015 11:30 AM (1h 30m)

Presenter: Dr SUBOTIC, Vladimir (BSC)

Session Classification: Parallel Programming with MPI (2 h lectures, 1 h practical)

Contribution ID: 17

Type: **Lecture**

Introduction to parallel architectures, algorithms design and performance parameters

Tuesday, June 30, 2015 9:30 AM (1 hour)

Presenter: Dr ALEXANDROV, Vassil (BSC)

Session Classification: Introduction to HPC and MPI (2h lectures, 1h practical)

Contribution ID: **18**

Type: **Lecture**

Introduction to the MPI programming model

Tuesday, June 30, 2015 10:30 AM (30 minutes)

Presenter: Dr STRASSBURG, Janko (BSc)

Session Classification: Introduction to HPC and MPI (2h lectures, 1h practical)

Contribution ID: **19**

Type: **Practical**

Practical: How to compile and run MPI applications

Tuesday, June 30, 2015 11:30 AM (1h 30m)

Presenter: Dr STRASSBURG, Janko (BSC)

Session Classification: Introduction to HPC and MPI (2h lectures, 1h practical)

Contribution ID: 20

Type: **Lecture**

Introduction to Paraver: tool to analyze and understand performance

Tuesday, June 30, 2015 2:00 PM (30 minutes)

Presenter: Dr SUBOTIC, Vladimir (BSC)

Session Classification: Performance Analysis and Prediction (1h30' lectures, 1h30' practical)

Contribution ID: 21

Type: **Practical**

Practical: Trace generation and trace analysis

Tuesday, June 30, 2015 2:30 PM (1 hour)

Presenter: Dr SUBOTIC, Vladimir (BSC)

Session Classification: Performance Analysis and Prediction (1h30' lectures, 1h30' practical)

Contribution ID: 22

Type: **not specified**

Tareador: understanding and predicting the potential of task decomposition strategies

Tuesday, June 30, 2015 4:00 PM (1h 30m)

Presenter: Dr SUBOTIC, Vladimir (BSC)

Session Classification: Performance Analysis and Prediction (1h30' lectures, 1h30' practical)