

**Eleventh INFN International
School on: "Architectures,
tools and methodologies for
developing efficient large scale
scientific computing
applications" ESC19 -
Bertinoro (Forlì-Cesena) Italy
20 - 26 October 2019**

Report of Contributions

Contribution ID: 0

Type: **not specified**

Efficient Memory Management

Tuesday, 22 October 2019 08:30 (45 minutes)

Presenter: INNOCENTE, Vincenzo (CERN)

Session Classification: Session 2

Contribution ID: 1

Type: **not specified**

Efficient Memory Management

Tuesday, 22 October 2019 09:15 (45 minutes)

Presenter: INNOCENTE, Vincenzo (CERN)

Session Classification: Session 2

Contribution ID: 2

Type: **not specified**

Efficient C++ programming

Tuesday, 22 October 2019 10:30 (45 minutes)

Presenter: GIACOMINI, Francesco (CNAF)

Session Classification: Session 2

Contribution ID: 3

Type: **not specified**

Efficient C++ programming

Tuesday, 22 October 2019 11:15 (45 minutes)

Presenter: GIACOMINI, Francesco (CNAF)

Session Classification: Session 2

Contribution ID: 4

Type: **not specified**

Consolidation

Tuesday, 22 October 2019 12:00 (1 hour)

Session Classification: Session 2

Contribution ID: 5

Type: **not specified**

Introduction to parallel computing

Tuesday, 22 October 2019 15:00 (30 minutes)

Summary

Presenter: PANTALEO, Felice (CERN)

Session Classification: Session 2

Contribution ID: 6

Type: **not specified**

Parallel Programming in C++

Tuesday, 22 October 2019 15:30 (1 hour)

Summary

Presenter: PANTALEO, Felice (CERN)

Session Classification: Session 2

Contribution ID: 7

Type: **not specified**

Parallel Programming with C++

Tuesday, 22 October 2019 17:00 (45 minutes)

Summary

Presenter: PANTALEO, Felice (CERN)

Session Classification: Session 2

Contribution ID: 8

Type: **not specified**

Students lightning presentations

Tuesday, 22 October 2019 17:45 (45 minutes)

Session Classification: Session 2

Contribution ID: 9

Type: **not specified**

Welcome and introduction

Monday, 21 October 2019 09:00 (30 minutes)

Presenter: MORANDIN, Mauro (INFN - Padova)

Session Classification: Session 1

Contribution ID: **10**

Type: **not specified**

Computer Architecture evolution and the performance challenge

Monday, 21 October 2019 09:30 (1 hour)

Presenter: INNOCENTE, Vincenzo (CERN)

Session Classification: Session 1

Contribution ID: 11

Type: **not specified**

Computer Architecture evolution and the performance challenge

Monday, 21 October 2019 11:00 (45 minutes)

Presenter: INNOCENTE, Vincenzo (CERN)

Session Classification: Session 1

Contribution ID: 12

Type: **not specified**

Hands-on environment checkout

Monday, 21 October 2019 11:45 (45 minutes)

Summary

Presenter: GIACOMINI, Francesco (CNAF)

Session Classification: Session 1

Contribution ID: 13

Type: **not specified**

Efficient C++ programming

Monday, 21 October 2019 14:00 (45 minutes)

Summary

Presenter: GIACOMINI, Francesco (CNAF)

Session Classification: Session 1

Contribution ID: 14

Type: **not specified**

Efficient C++ programming

Monday, 21 October 2019 14:45 (45 minutes)

Summary

Presenter: GIACOMINI, Francesco (CNAF)

Session Classification: Session 1

Contribution ID: 15

Type: **not specified**

Efficient C++ programming

Monday, 21 October 2019 16:00 (45 minutes)

Summary

Presenter: GIACOMINI, Francesco (CNAF)

Session Classification: Session 1

Contribution ID: **16**

Type: **not specified**

Consolidation

Monday, 21 October 2019 16:45 (30 minutes)

Session Classification: Session 1

Contribution ID: 17

Type: **not specified**

Students lightning presentations

Monday, 21 October 2019 17:15 (45 minutes)

Session Classification: Session 1

Contribution ID: **18**

Type: **not specified**

Students feedback

Saturday, 26 October 2019 08:30 (30 minutes)

Session Classification: Session 9

Contribution ID: **19**

Type: **not specified**

Final examination

Saturday, 26 October 2019 09:00 (2 hours)

Session Classification: Session 9

Contribution ID: **20**

Type: **not specified**

Delivery of certificates of attendance

Saturday, 26 October 2019 11:30 (30 minutes)

Session Classification: Session 9

Contribution ID: 21

Type: **not specified**

Shuttle departure (to Forlì railway station)

Saturday, 26 October 2019 13:00 (20 minutes)

Summary

Session Classification: Session 9

Contribution ID: 22

Type: **not specified**

Efficient C++ programming

Wednesday, 23 October 2019 08:30 (45 minutes)

Presenter: GIACOMINI, Francesco (CNAF)

Session Classification: Session 3

Contribution ID: 23

Type: **not specified**

Efficient C++ programming

Wednesday, 23 October 2019 09:15 (45 minutes)

Presenter: GIACOMINI, Francesco (CNAF)

Session Classification: Session 3

Contribution ID: 24

Type: **not specified**

Introduction to Intel Threading Building Blocks

Wednesday, 23 October 2019 10:30 (1h 30m)

Summary

Presenter: PANTALEO, Felice (CERN)

Session Classification: Session 3

Contribution ID: 25

Type: **not specified**

Consolidation

Wednesday, 23 October 2019 12:00 (1 hour)

Session Classification: Session 3

Contribution ID: 26

Type: **not specified**

Introduction to GPU Programming using CUDA

Wednesday, 23 October 2019 14:30 (2 hours)

Summary

Presenter: PANTALEO, Felice (CERN)

Session Classification: Session 3

Contribution ID: 27

Type: **not specified**

Introduction to GPU Programming using CUDA

Summary

Presenter: PANTALEO, Felice (CERN)

Session Classification: Session 3

Contribution ID: **28**

Type: **not specified**

Consolidation

Wednesday, 23 October 2019 17:00 (1h 30m)

Session Classification: Session 3

Contribution ID: 29

Type: **not specified**

Efficient floating-point computation and vectorization

Thursday, 24 October 2019 08:30 (45 minutes)

Presenter: INNOCENTE, Vincenzo (CERN)

Session Classification: Session 4

Contribution ID: **30**

Type: **not specified**

Efficient floating-point computation and vectorization

Thursday, 24 October 2019 09:15 (45 minutes)

Presenter: INNOCENTE, Vincenzo (CERN)

Session Classification: Session 4

Contribution ID: 31

Type: **not specified**

Efficient floating-point computation and vectorization

Thursday, 24 October 2019 10:30 (45 minutes)

Presenter: INNOCENTE, Vincenzo (CERN)

Session Classification: Session 4

Contribution ID: **32**

Type: **not specified**

Consolidation

Thursday, 24 October 2019 11:15 (1h 45m)

Session Classification: Session 4

Contribution ID: 33

Type: **not specified**

Cooperating GPU threads: Shared memory and Synchronization

Thursday, 24 October 2019 14:30 (45 minutes)

Summary

Presenter: PANTALEO, Felice (CERN)

Session Classification: Session 4

Contribution ID: 34

Type: **not specified**

Cooperating GPU threads: Shared memory and Synchronization

Thursday, 24 October 2019 15:15 (45 minutes)

Summary

Presenter: PANTALEO, Felice (CERN)

Session Classification: Session 4

Contribution ID: 35

Type: **not specified**

Consolidation

Thursday, 24 October 2019 16:00 (30 minutes)

Session Classification: Session 4

Contribution ID: **36**

Type: **not specified**

Consolidation

Thursday, 24 October 2019 17:00 (1h 15m)

Session Classification: Session 4

Contribution ID: 37

Type: **not specified**

Evening lecture TBC

Summary

Session Classification: Session 4

Contribution ID: **38**

Type: **not specified**

GPUs management and streams

Friday, 25 October 2019 09:00 (1 hour)

Summary

Presenter: PANTALEO, Felice (CERN)

Session Classification: Friday

Contribution ID: 39

Type: **not specified**

Programming Clusters with MPI

Friday, 25 October 2019 10:00 (45 minutes)

Summary

Presenter: PANTALEO, Felice (CERN)

Session Classification: Friday

Contribution ID: 40

Type: **not specified**

Cluster Computing with MPI

Friday, 25 October 2019 11:15 (1h 45m)

Summary

Presenter: PANTALEO, Felice (CERN)

Session Classification: Friday

Contribution ID: 41

Type: **not specified**

Consolidation

Friday, 25 October 2019 14:30 (2 hours)

Summary

Session Classification: Friday

Contribution ID: 42

Type: **not specified**

Cluster Computing with MPI

Summary

Presenter: PANTALEO, Felice (CERN)

Session Classification: Friday

Contribution ID: 43

Type: **not specified**

Consolidation

Session Classification: Friday

Contribution ID: 44

Type: **not specified**

Consolidation

Friday, 25 October 2019 17:00 (1 hour)

Session Classification: Friday

Contribution ID: 45

Type: **not specified**

Floating point computing efficiency

Presenter: INNOCENTE, Vincenzo (CERN)

Contribution ID: 46

Type: **not specified**

Consolidation

Contribution ID: 47

Type: **not specified**

Consolidation

Contribution ID: 48

Type: **not specified**

Consolidation

Contribution ID: 49

Type: **not specified**

GPUs and the Heterogeneous programming problem

Presenter: Dr MATTSON, Tim (Intel)

Contribution ID: 50

Type: **not specified**

GPU programming with OpenCL: Core Ideas and the host program

Presenter: Dr MATTSON, Tim (Intel)

Contribution ID: 51

Type: **not specified**

Vectorization

Presenter: INNOCENTE, Vincenzo (CERN)