

Future computing in particle physics

Report of Contributions

Contribution ID: 0

Type: **not specified**

Welcome and Overview

Wednesday 15 June 2011 14:00 (10 minutes)

Presenter: CLARK, Philip (University of Edinburgh)

Session Classification: Overview and LHC Computing Challenges

Contribution ID: 1

Type: **not specified**

Atlas Computing Challenges

Contribution ID: 2

Type: **not specified**

Atlas computing challenges

Wednesday 15 June 2011 14:10 (20 minutes)

Presenter: SHANK, Jim (Department of Physics-Boston University)

Session Classification: Overview and LHC Computing Challenges

Contribution ID: 3

Type: **not specified**

CMS strategic and tactical choices for multicore computing

Wednesday 15 June 2011 14:30 (20 minutes)

Presenter: Mr EULISSE, Giulio (FERMILAB)

Session Classification: Overview and LHC Computing Challenges

Contribution ID: 4

Type: **not specified**

Atlas software challanges

Wednesday 15 June 2011 15:20 (20 minutes)

Presenter: ROUSSEAU, David (CERN)

Session Classification: Overview and LHC Computing Challenges

Contribution ID: 5

Type: **not specified**

Issues with Simulating Events at High Luminosity in ATLAS

Wednesday 15 June 2011 16:00 (30 minutes)

Presenter: CHAPMAN, John Derek (Cavendish Lab., Dept. of Physics-University of Cambridge)

Session Classification: Overview and LHC Computing Challenges

Contribution ID: 6

Type: **not specified**

Manycore/gpu hardware: industry view

Thursday 16 June 2011 09:00 (30 minutes)

Presenter: Mr GOFF, Roger (DELL)

Session Classification: Multicore Hardware and Applications

Contribution ID: 7

Type: **not specified**

Performance of Multi-Core Batch Nodes in a HEP Environment

Thursday 16 June 2011 10:20 (20 minutes)

Presenter: Mr ALEF, Manfred (KIT)

Session Classification: Multicore Hardware and Applications

Contribution ID: 8

Type: **not specified**

Implementing parallel algorithms for data analysis in the ROOT/RooFit package

Thursday 16 June 2011 15:30 (20 minutes)

Presenter: Dr LAZZARO, Alfio (CERN)

Session Classification: GPU/Manycore Applications: Motivation and projects

Contribution ID: 9

Type: **not specified**

Experiences on using GPU accelerators for data analysis in ROOT/RooFit package

Thursday 16 June 2011 15:50 (20 minutes)

Presenter: LINDAL, Yngve Sneen (Norges Teknisk-Naturvitens. Univ. (NTNU))

Session Classification: GPU/Manycore Applications: Motivation and projects

Contribution ID: **10**

Type: **not specified**

Matrix Element analyses

Friday 17 June 2011 12:00 (20 minutes)

Presenter: HARRINGTON, Robert (Boston University)

Session Classification: GPU/Manycore Applications: Motivation and projects

Contribution ID: 11

Type: **not specified**

GP using GPGPU - my experience with OpenCL

Friday 17 June 2011 11:30 (30 minutes)

Presenter: VUKOTIC, Ilija (Laboratoire de l'Accelérateur Lineaire (LAL)-Universite de Pari)

Session Classification: GPU/Manycore Applications: Motivation and projects

Contribution ID: 12

Type: **not specified**

Atlas HLT GPU Overview

Presenter: WASHBROOK, Andrew John (CERN)

Contribution ID: 13

Type: **not specified**

Kalman filter

Friday 17 June 2011 10:30 (20 minutes)

Presenter: EMELIYANOV, Dmitry (Particle Physics)

Session Classification: GPU/Manycore Applications: Motivation and projects

Contribution ID: 14

Type: **not specified**

Bytestream decoding and cluster formation

Friday 17 June 2011 10:50 (20 minutes)

Presenter: HOWARD, Jacob (CERN)

Session Classification: GPU/Manycore Applications: Motivation and projects

Contribution ID: 15

Type: **not specified**

Atlas Analysis Model Perspectives

Thursday 16 June 2011 15:10 (20 minutes)

Presenter: FARBIN, Amir (Department of Physics-University of Texas at Arlington)

Session Classification: GPU/Manycore Applications: Motivation and projects

Contribution ID: 16

Type: **not specified**

Remote I/O for users and future of CMS I/O layers.

Thursday 16 June 2011 14:10 (30 minutes)

Presenter: BOCKELMAN, Brian Paul (University of Nebraska)

Session Classification: Future IO

Contribution ID: 17

Type: **not specified**

ATLAS IO Improvements and Future

Presenter: VUKOTIC, Ilija (Laboratoire de l'Accelérateur Lineaire (LAL)-Universite de Pari)

Contribution ID: **18**

Type: **not specified**

Progress and plans on multicore for Atlas

Thursday 16 June 2011 09:30 (30 minutes)

Presenter: CALAFIURA, Paolo (Lawrence Berkeley National Lab. (LBNL))

Session Classification: Multicore Hardware and Applications

Contribution ID: 19

Type: **not specified**

Optimization Using Tracing JITs

Thursday 16 June 2011 11:30 (30 minutes)

Presenter: LAVRIJSEN, Wim (Lawrence Berkeley National Lab. (LBNL))

Session Classification: Software optimisation and performance tuning

Contribution ID: 20

Type: **not specified**

Performance analysis tools

Thursday 16 June 2011 12:00 (20 minutes)

Presenters: CALAFIURA, Paolo (Lawrence Berkeley National Lab. (LBNL)); VITILLO, Roberto Agostino (Lawrence Berkeley National Lab. (LBNL)); LAVRIJSEN, Wim (Lawrence Berkeley National Lab. (LBNL))

Session Classification: Software optimisation and performance tuning

Contribution ID: 21

Type: **not specified**

Future of Distributed Computing and Job Transforms

Presenter: STEWART, Graeme Andrew (CERN)

Contribution ID: 22

Type: **not specified**

Atlas whole node plans

Thursday 16 June 2011 10:00 (20 minutes)

Presenters: WASHBROOK, Andrew John (University of Edinburgh); Dr SMITH, Douglas (STANFORD LINEAR ACCELERATOR CENTER)

Session Classification: Multicore Hardware and Applications

Contribution ID: 23

Type: **not specified**

CVMFS

Thursday 16 June 2011 12:20 (20 minutes)

Presenter: COLLIER, Ian (UK Tier1 Centre)

Session Classification: Software optimisation and performance tuning

Contribution ID: 24

Type: **not specified**

Perspectives on ATLAS tracking and the upgrade

Friday 17 June 2011 09:00 (20 minutes)

Presenter: ELSING, Markus (CERN)

Session Classification: GPU/Manycore Applications: Motivation and projects

Contribution ID: 25

Type: **not specified**

Track reconstruction on GPUs

Friday 17 June 2011 09:20 (20 minutes)

Presenter: SCHMITT, Christian (Institut fuer Physik-Johannes-Gutenberg-Universitaet Mainz)

Session Classification: GPU/Manycore Applications: Motivation and projects

Contribution ID: 26

Type: **not specified**

CPU with event size pile up

Presenter: Dr KITTELMANN, Thomas (CERN)

Contribution ID: 27

Type: **not specified**

LLVM

Thursday 16 June 2011 11:10 (20 minutes)

Presenter: SEUSTER, Rolf (Max-Planck-Institut fuer Physik-Max-Planck-Gesellschaft (MPG))

Session Classification: Software optimisation and performance tuning

Contribution ID: **28**

Type: **not specified**

Atlas IO improvements and Future prospects

Thursday 16 June 2011 14:40 (20 minutes)

Presenters: VUKOTIC, Ilija (Laboratoire de l'Accelérateur Lineaire (LAL)-Université de Paris); BHIMJI, Wahid (University of Edinburgh)

Session Classification: Future IO

Contribution ID: 29

Type: **not specified**

non-ROOT I/O

Thursday 16 June 2011 13:40 (30 minutes)

Presenter: KHALATYAN, Samvel (University of Illinois at Chicago)

Session Classification: Future IO

Contribution ID: **30**

Type: **not specified**

ATLAS Distributed Computing Plans for the Future

Wednesday 15 June 2011 15:40 (20 minutes)

Presenter: Dr KLIMENTOV, Alexei (Department of Physics-Brookhaven National Laboratory (BNL))

Session Classification: Overview and LHC Computing Challenges

Contribution ID: **31**

Type: **not specified**

Discussion

Wednesday 15 June 2011 16:30 (30 minutes)

Session Classification: Overview and LHC Computing Challenges

Contribution ID: **32**

Type: **not specified**

TMVA method optimisation feasibility study

Thursday 16 June 2011 16:10 (10 minutes)

Presenter: WASHBROOK, Andrew John (CERN)

Session Classification: GPU/Manycore Applications: Motivation and projects

Contribution ID: 33

Type: **not specified**

Discussion - Future Plans

Thursday 16 June 2011 16:20 (40 minutes)

Session Classification: GPU/Manycore Applications: Motivation and projects

Contribution ID: **34**

Type: **not specified**

HLT: Z Finder

Friday 17 June 2011 10:20 (10 minutes)

Presenter: WASHBROOK, Andrew John (University of Edinburgh)

Session Classification: GPU/Manycore Applications: Motivation and projects

Contribution ID: 35

Type: **not specified**

Discussion

Friday 17 June 2011 11:10 (20 minutes)

Session Classification: GPU/Manycore Applications: Motivation and projects

Contribution ID: 36

Type: **not specified**

Programming hybrid architectures with OpenMP accelerator directives

Friday 17 June 2011 12:20 (20 minutes)

Presenter: Dr HART, Alistair (Cray Exascale Research Initiative Europe)

Session Classification: GPU/Manycore Applications: Motivation and projects

Contribution ID: 37

Type: **not specified**

Whisky Tasting Welcome Reception

Wednesday 15 June 2011 18:00 (1 hour)

Including Lecture on The Malt Whisky Cluster Vortex and Private Tour of Surgeons Museum.
Sponsored by Dell.

Presenter: Dr DAVID, Wishart

Contribution ID: **38**

Type: **not specified**

Workshop dinner

Thursday 16 June 2011 19:30 (2 hours)

Agua Restaurant, Apex City Hotel, Grassmarket, Edinburgh

(Note: there are two Apex hotels in Grassmarket...)