

Science Applications for Exascale Computing – Exploring New Avenues towards Scalability and Fault-Tolerance



Report of Contributions

Contribution ID: 0

Type: **not specified**

Welcome address

Monday, 7 September 2015 09:00 (30 minutes)

Contribution ID: 2

Type: **not specified**

Quo vadis, HPC?

Monday, 7 September 2015 09:30 (1h 15m)

Presenters: Prof. REINEFELD, Alexander (Zuse Institute Berlin); Prof. LIPPERT, Thomas (Jülich Supercomputing Centre); Prof. LINDENSTRUTH, Volker (Johann-Wolfgang-Goethe Univ. (DE))

Contribution ID: 4

Type: **Invited talk**

Taming heterogeneity by segregation –the DEEP view on exascale

Monday, 7 September 2015 11:30 (45 minutes)

Presenter: Prof. EICKER, Norbert (Forschungszentrum Jülich)

Contribution ID: 6

Type: **Invited talk**

Milliwatts and PetaFLOPS

Monday, 7 September 2015 14:00 (45 minutes)

Presenter: Dr KLEMM, Michael (Intel Corporation)

Contribution ID: 9

Type: **Invited talk**

Remote memory access programming at extreme scale

Monday, 7 September 2015 15:15 (45 minutes)

Presenter: Prof. HÖFLER, Thorsten (ETH Zürich)

Contribution ID: **10**

Type: **Invited talk**

Ultrarelativistic molecular dynamics on GPU –the little bang in the laboratory

Monday, 7 September 2015 16:45 (45 minutes)

Presenter: Prof. PETERSEN, Hannah

Contribution ID: 11

Type: **Invited talk**

Online data reconstruction in high-energy physics experiments on many-core computer architectures

Monday, 7 September 2015 18:00 (45 minutes)

Presenter: Prof. KISEL, Ivan (Johann-Wolfgang-Goethe Univ. (DE))

Contribution ID: 12

Type: **Invited talk**

In-silico science and technology: from atoms to cognitive computing

Tuesday, 8 September 2015 09:00 (45 minutes)

Presenter: Dr CURIONI, Alessandro (IBM Research –Zürich)

Contribution ID: 13

Type: **Invited talk**

Exploring exascale avenues for lattice QCD

Tuesday, 8 September 2015 10:00 (45 minutes)

Presenter: Prof. PLEITER, Dirk (DESY)

Contribution ID: 14

Type: **Invited talk**

Simulation of light propagation through photonic materials and brain tissue on the IBM BlueGene/Q

Tuesday, 8 September 2015 11:30 (45 minutes)

Presenter: Prof. MICHIELSEN, Kristel (Forschungszentrum Jülich)

Contribution ID: 15

Type: **Invited talk**

Big data in astronomy 2020+

Tuesday, 8 September 2015 14:00 (45 minutes)

Presenter: Prof. STEINMETZ, Matthias (Leibniz-Institut für Astrophysik Potsdam)

Contribution ID: 17

Type: **Invited talk**

3D radiative transfer simulations of stellar & planetary atmospheres

Tuesday, 8 September 2015 15:15 (45 minutes)

Presenter: Prof. HAUSCHILDT, Peter (Universität Hamburg)

Contribution ID: **18**

Type: **Invited talk**

Astrophysical GPU supercomputing, star clusters and black holes

Tuesday, 8 September 2015 16:45 (45 minutes)

Presenter: Prof. SPURZEM, Rainer (Univ. of Heidelberg, Germany)

Contribution ID: 19

Type: **Invited talk**

Scalability of atmospheric turbulence simulations on next generation hybrid computer architectures – challenges and perspectives

Wednesday, 9 September 2015 09:00 (45 minutes)

Presenter: Prof. RAASCH, Siegfried (Universität Hannover)

Contribution ID: 21

Type: **Invited talk**

Simulation of brain-scale neuronal networks at cellular and synaptic resolution

Wednesday, 9 September 2015 10:00 (45 minutes)

Presenter: Prof. DIESMANN, Markus (Forschungszentrum Jülich)

Contribution ID: 24

Type: **Invited talk**

Directive-based parallel programming at scale

Wednesday, 9 September 2015 11:30 (45 minutes)

Presenter: Prof. CHAPMAN, Barbara (Houston University)

Contribution ID: 25

Type: **not specified**

Wrap-up / end of seminar

Wednesday, 9 September 2015 12:30 (15 minutes)