Agenda

Tuesday, 18 Sept 2018

08:15 h	*Shuttle from Jülich ("Neues Rathaus") to Conference venue*
09:00 h – 09:30 h	Welcome address (Harald Bolt, member of the Board of Directors, FZ Jülich) Workshop objectives and logistics (Martin Schultz, FZ Jülich)
Session 1: Extreme Data Demands	
09:30 h – 09:50 h	Markus Reichstein (MPI BGC, DE) "Data-driven Earth System Science – Challenges and Perspectives"
09:50 h – 10:10 h	Steve Aplin (DESY, DE) "Data Challenges in Serial Femtosecond Crystallography"
10:10 h – 10:30 h	Giovanni Pizzi (EPFL, CH) "Extreme-Data Demands in Materials Science: Dealing with High-Throughput Calculations towards the Exascale"
10:30 h – 11:00 h	*Coffee break*
11:00 h – 11:20 h	Paolo Papale (INGV, IT) "Extreme data in volcano science: issues, demands, and challenges"
11:20 h – 11:40 h	Dörthe Handorf (AWI, DE) "Analysis of the atmospheric circulation from big data in climate modeling – Current approaches and future challenges"
11:40 h – 12:00 h	Jan Erik Sundermann (KIT, DE) "The Challenge of the Data Demands of the High Luminocity LHC Experiments for the GridKa WLCG Tier-1 Center at KIT"
12:00 h – 13:30 h	*Lunch break*
Session 2: Extreme Data Technologies	
13:30 h – 13:50 h	Guido Juckeland (HZDR, DE) "Is It Here/There Yet? - Real Life Experiences of Generating/Evaluating Extreme Data Sets Around the World"
13:50 h – 14:10 h	Sadaf Alam (CSCS, CH) "What is trending at large-scale experimental facilities for managing unprecedented data growth"
14:10 h – 14:30 h	Stephan Kindermann (DKRZ, DE) "Towards exascale climate data handling: infrastructure, data management and data services"
14:30 h – 14:50 h	Tiago Quintino (ECMWF, UK) "ECMWF's Extreme Data Challenges on the HPC and Cloud systems"
14:50 h – 15:10 h	Bryan Lawrence (University of Reading, UK) "Two approaches to beating data bottlenecks in weather and climate science"
15:10 h – 15:40 h	*Coffee break*
15:40 h – 16:00 h	Dirk Pleiter (FZ Jülich, DE) "Future I/O Architectures and Infrastructures for Extreme Scale Data Analytics"

(Day 1 continued)

16:00 h – 17:00 h	Vendors' views on emerging extreme data technologies: - IBM (Oliver Oberst) - DDN (Jean-Thomas Acquaviva) - Cray (NN, TBC)
17:00 h	*Adjourn of day 1 – Shuttle to Jülich ("Neues Rathaus")*
19:15 h	*Shuttle from Jülich ("Neues Rathaus") to Conference Dinner at Burg Obbendorf*
19:45 h – 22:15 h	*Conference Dinner at Burg Obbendorf*
22:15 h	*Shuttle to Jülich ("Neues Rathaus")*

Wednesday, 19 Sept 2018

08:30 h	*Shuttle from Jülich ("Neues Rathaus") to conference venue*
Session 3: Extreme Data Services	
09:10 h – 09:30 h	Peter Bauer (ECMWF, UK) "Extreme data and computing in operational weather prediction"
09:30 h – 09:50 h	Jeannot Trampert (University Utrecht, NL) "Data flow and assimilation in computational seismology"
09:50 h – 10:10 h	Klaus Goergen (FZ Jülich, DE) "Towards big data-enabled terrestrial systems modelling at HPSC TerrSys"
10:10 h – 10:30 h	Jens Bröder (FZ Jülich, DE) "Using the AiiDA framework for Data generation and processing in Materials Science"
10:30 h – 11:00 h	*Coffee break*
11:00 h – 11:20 h	Ugur Cayoglu (KIT, DE) "Flexible Toolkit Developments for Climate Data Applications: Compression and Tensor Frameworks"
11:20 h – 11:40 h	Kai Krajsek (FZ Jülich, DE) "The Helmholtz Analytics Toolkit (HeAT) - A Scientific Big Data Library for HPC"
11:40 h – 12:30 h	Concluding discussions: - Communalities and differences in data demands across and within scientific disciplines - Will technologies on the horizon be able to meet the needs? - How quickly will data management evolve to data services? - Relevance of workshop conclusions for ExtremeEarth
12:30 h – 13:00 h	*Lunch break*
13:00 h	*Shuttle departure to airports and train station Düren*