esiwace
CENTRE OF EXCELLENCE IN SIMULATION OF WEATHER AND CLIMATE IN EUROPE

ESiWACE2 Virtual Workshop on

Emerging Technologies for Weather and Climate Modelling

June 30, 2020

10.30 - 18.45 CEST

Agenda

10:30-10:45	*VC Available for test*	
10:45-10:50	**Welcome**	**G. Riley, G. Aloisio**
10:50-12:30	**Session 1 – Exascale hardware**	**Chair: Graham Riley**
10:50-11:10	A useful definition of exascale computing for weather and climate modelling	Thomas Schulthess (CSCS)
11:10-11:30	Future HPC systems made in Europe	Jesus Labarta (BSC)
11:30-11:50	European Processor Initiative: the European approach for Exascale ages	Jean-Marc Denis (ATOS/EPI)
11:50-12:10	LUMI: the EuroHPC pre-exascale system of the North	Kimmo Koski (CSC/LUMI)
12:10-12:30	Towards a Modular Supercomputing Architecture for Exascale	Estela Suarez (Jülich Supercomputing Centre)
12:30-14:00	*Lunch Break*	

14:00-16:00	**Session 2 – Programming models and hardware interplay**	**Chair: Carlos Osuna**
14:00-14:20	The Euroexa system architecture for exascale	John Goodacre (University of Manchester)
14:20-14:40	Developing DSLs in ESiWACE2	Rupert Ford (STFC)
14:40-15:00	Whole program code generation for Ocean simulation	Harald Köstler (University of Erlangen-Nuremberg)
15:00-15:20	Exascale programming models: beyond "MPI+X"	Simon McIntosh-Smith (University of Bristol)
15:20-15:40	Programming dynamic workflows in the Exascale Era	Daniele Lezzi (BSC)
15:40-16:00	LFRic and PSyclone: Utilising DSLs for performance portability	Iva Kavcic (UK Met Office)
16:00-16:30	*Coffee Break*	
16:30-18:30	**Session 3 – Machine Learning**	**Chair: Giovanni Aloisio**
16:30-16:50	Deep Learning for Post-Processing Ensemble Weather Forecast	Torsten Hoefler (ETH, Zürich))
16:50-17:10	Machine learning for weather predictions at ECMWF	Peter Dueben (ECMWF)
17:10-17:30	Efficiently constraining parameter uncertainty in a General Circulation Model using targeted data	Oliver Dunbar (Caltech)
17:30-17:50	Hybrid modeling: best of both worlds?	Pierre Gentine (Columbia University)
17:50-18:10	Climate Informatics: Machine Learning for the Study of Climate Change	Claire Monteleoni (Colorado University)
18:10-18:30	Machine-learning of moist physics parameterizations for a climate model using coarse-graining of global cloud-resolving model output	Noah Brenowitz (Vulcan Inc.)
18:30-18:45	**Wrap up and closing session**	

Program Committee

Giovanni Aloisio, Graham Riley, Sandro Fiore, Carlos Osuna

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