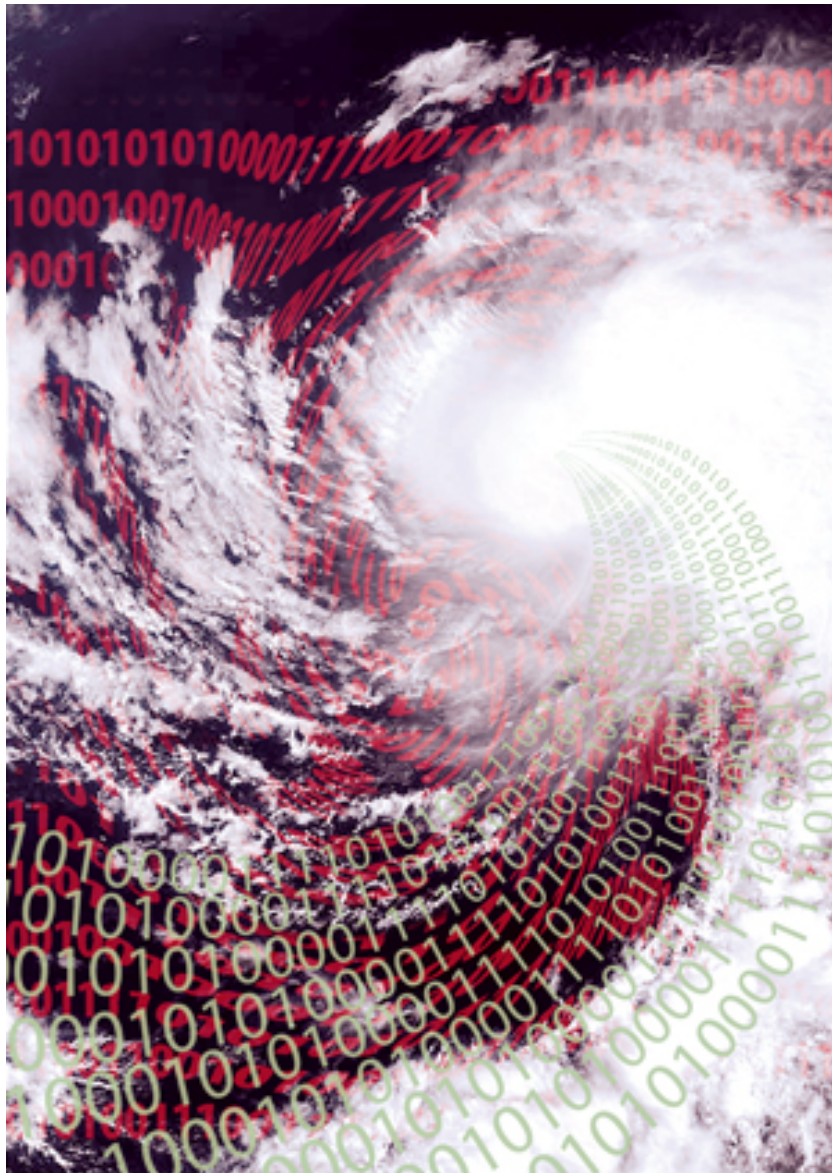




**Fifteenth ECMWF Workshop
High Performance Computing in Meteorology
1 – 5 October 2012**

Final programme



Final programme

Monday 1 October

08.30 REGISTRATION AND COFFEE

09.15 WELCOME AND OPENING

Alan Thorpe, Director-General and Isabella Weger, Head of Computer Division

SESSION 1

09:30 Erland Källén, ECMWF ECMWF forecasting system - research and development

10:00 Deborah Salmond / Peter Towers, ECMWF Performance of IFS on ECMWF's new HPCF

10:30 Coffee

SESSION 2

11:00 Anke Kamrath, NCAR Data intensive supercomputing at NCAR

11:30 Allan Darling, NCEP NCEP high performance computing acquisition and migration

12:00 Mark Iredell, NOAA/NWS/NCEP NCEP Applications -- HPC Performance and Strategies

12:30 Lunch

SESSION 3

14:00 Martyn Foster, Met Office Towards zero cost IO in the Unified Model

14:30 Bertrand Denis, Canadian Meteorological Centre HPC enabling NWP at the Canadian Meteorological Centre

15:00 Vivian Lee, Canadian Meteorological Centre The CMC 15-km Operational Deterministic Global

15:30 Coffee

SESSION 4

16:00 Craig Tierney, NOAA A survey of performance characteristics of NOAA's weather and climate codes across our HPC systems

16:25 Eike Mueller, University of Bath Scalability of Elliptic solvers in numerical weather and climate-prediction

16:50 Rupert Ford, STFC Daresbury Towards a scalable performance-portable software infrastructure for the Gungho Dynamical Core

17:15 CLOSE

17:30 COCKTAILS

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Tuesday 2 October

SESSION 5

09:00	Franck Vigilant, Bull	Weather and climate simulations with BULL technology
09:30	Michael Lough, Hewlett-Packard Galway Ltd	A status update on HP's solutions for HPC, illustrated with examples from Research and Operational Weather
10:00	Stan Posey, NVIDIA	Kepler GPU architecture and benefits to Earth System Modeling
10:30	Coffee	

SESSION 6

11:00	Yuichi Kojima, NEC	Hybrid solutions for Meteo sites
11:30	Paul Selwood, Met Office	Early experiences with IBM p775 and ENDGame
12:00	Toshiyuki Shimizu, Fujitsu Limited	Findings from real petascale computer systems with meteorological applications
12:30	Lunch	

SESSION 7

14:00	Sandy MacDonald, NOAA	Global Modelling Research at NOAA/ESRL
14:25	Mark Govett, NOAA	An update on fine-grain computing activities at NOAA ESRL
14:50	Tom Henderson, NOAA	Performance and scaling of the NIM Global NWP Model on GPUs
15:15	Jim Rosinski, NOAA	Experiences porting a weather forecast model to the new Many Integrated Core (MIC) architecture from Intel
15:40	Coffee	

SESSION 8

16:10	Anne Fouilloux, ECMWF	Towards a scalable semi-structured data platform for COPE
16:35	Florian Prill, Deutscher Wetterdienst (DWD)	The Icosahedral Nonhydrostatic (ICON) model: Scalability on Massively Parallel Computer Architectures
17:00	Tuomo Kauranne / Alexander Bibov, Lappeenranta University of Technology	A stable and accurate Kalman filter for large scale weather data assimilation
17:25	CLOSE	

Final programme

Wednesday 3 October

09:00 **George Mozdzynski**, RAPS
Chairman RAPS introduction

SESSION 9

09:15 Ulrich Schättler, Deutscher
Wetterdienst (DWD) The enhanced DWD-RAPS Suite - Testing computers,
compilers and more?

09:40 Luis Kornbluh, Max Planck
Institute for Meteorology Parallel I/O for Scalable Earth System Modelling

10:05 Sami Saarinen, CSC - IT Center
for Science Ltd Offloading I/O in AROME

10:30 Coffee

SESSION 10

11:00 Eng Lim Goh, SGI Capability system with interconnect for global
addressability and hardware collectives

11:30 Keiko Takahashi, Earth Simulator
Center Multi-scale multi-physics simulations and toward next step
on the Earth Simulator

11:55 Jörg Behrens, DKRZ How to overcome common performance problems in legacy
climate models

12:20 Tomas Karlsson, SMHI The Nordic cooperation project on operational NWP

12:30 Lunch

SESSION 11

14:00 Francois Thomas, IBM France Optimisation of weather applications on power and x86
architectures

14:30 Phillip Webster, NASA Center for
Climate Simulation (NCCS) Climate supercomputing at NASA Goddard Space Flight
Center

14:55 Chris Gottbrath, Rogue Wave
Software Inc New developments with the TotalView Debugger: Scalable
messaging and support for the Intel Xeon Phi

15:20 Yannick Tremolet/Mike Fisher,
ECMWF From IFS to OOPS

15:45 Coffee

SESSION 12

16:15 Reinhard Budich, Max Planck
Institute for Meteorology An update on the European Network for Earth System
Modeling

16:40 George Mozdzynski, ECMWF A PGAS implementation by co-design of the ECMWF
integrated forecasting system (IFS)

17:05 RAPS DISCUSSION - open to all

17:30 **RECEPTION, FOLLOWED BY WORKSHOP DINNER**

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Thursday 4 October

SESSION 13

09:00	Jim Hack, Oak Ridge National Laboratory	Leadership Computing at the National Center for Computational Science: Transitioning to Heterogeneous Architectures
10:00	Xavier Lapillonne, MeteoSwiss	Adapting Numerical Weather Prediction codes to heterogeneous architectures: porting the COSMO model to GPUs
10:30	Coffee	

SESSION 14

11:00	Masami Narita, Japan Meteorological Agency	Management system of a vast number of operational jobs at JMA
11:30	George Carr, NOAA/GSD	Satisfying operational requirements for fault-tolerance of NWP ensembles
12:00	Per Nyberg, Cray Inc	Earth System Modeling at the Extreme Scale
12:30	Lunch	

SESSION 15

14:00	Robin Bowen, Australian Bureau of Meteorology	Progress in NWP on Intel HPC architecture at the Australian Bureau of Meteorology
14:25	James Doyle, Naval Research Laboratory	A multiscale non-hydrostatic atmospheric model for regional and global applications
14:50	Melinda Peng, Naval Research Laboratory	The current and future US Navy Global Prediction Systems: Developments under ESPC
15:15	Tim Hultberg, EUMETSAT	Meeting timeliness and throughput constraints in IASI L2 operational processing
15:40	Coffee	

SESSION 16

16:10	Torben King-Petersen, Xyratex	Advanced Lustre infrastructure monitoring
16:35	Glenn Wright, DataDirect Networks	Accelerating data management
17:00	Milan Dacic, Republic Hydrometeorological Service of Serbia	High performance computing in Serbian Hydrometeorological Service
17:25	CLOSE	

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Friday 5 October

SESSION 17

09:00	William Skamarock, NCAR/NESL, MMM	The global nonhydrostatic atmospheric model MPAS: Preliminary results from uniform and variable-resolution mesh tests
09:30	Enda O'Brien, Irish Centre for High-End Computing	Stabilizing high-resolution HARMONIE
10:00	Zbigniew Piotrowski, IMGW- PIB	Atmospheric soundproof model with three-directional MPI parallelization
10:30	Coffee	

SESSION 18

11:00 **Round table discussion**

12:00 CLOSE