ECMWF Annual Seminar Recent Developments in Numerical Methods for Atmosphere and Ocean Modelling, 2 - 5 September 2013

Programme

Monday 2 September

13.00-13.15	Opening	Erland Källén (ECMWF)
13.15-14.15	The ECMWF model, progress and challenges	Nils Wedi, ECMWF
14.15-15.15	GungHo, a new dynamical core for the Unified Model	Nigel Wood, UK MetOffice
15.15-15.45	*coffee break*	
15.45-16.45	A non-hydrostatic, semi-implicit dynamical core for NWP: current state, limitations and perspectives	Pierre Bénard, MétéoFrance
16.45-17.45	The Icosahedral Nonhydrostatic (ICON) Modelling framework of DWD and MPI-M	Günther Zängl, DWD
18.00	*Cocktail Reception*	

Tuesday 3 September

9.15-10.15	Parallelisation and exascale computing challenges	George Mozdzynski, ECMWF
10.15-10.45	*coffee break*	
10.45-11.45	Global non-hydrostatic modelling using Voronoi meshes	Bill Skamarock, NCAR
11.45-12.45	Physics/dynamics coupling at very high resolution	Sylvie Malardel, ECMWF
12.45-14.00	*lunch break*	
14.00-15.00	Global convection-permitting simulations	Hirofumi Tomita, RIKEN/AICS
15.00-15.30	*Coffee break*	
15.30-16.30	The non-hydrostatic convection-permitting HARMONIE model	Mariano Hortal, Hirlam/INM
16.30-17.30	The COSMO model: towards cloud-resolving NWP	Michael Baldauf, DWD

Wednesday 4 September

9.15-10.15	Ocean circulation and air-sea interaction	Peter Janssen, ECMWF
10.15-10.45	*coffee break*	
10.45-11.45	Multiscale ocean simulations on unstructured meshes	Sergey Danilov, AWI
11.45-12.45	Unstructured meshes for atmospheric simulations	Joanna Szmelter, University of Loughborough
12.45-14.00	*lunch break*	
14.00-15.00	Compatible finite element methods for NWP and climate	Colin Cotter, Imperial College
15.00-15.30	*Coffee break*	
15.30-16.30	Continuous (CG) and discontinuous Galerkin (DG) methods	Frank Giraldo, Naval Postgraduate School, Monterey
16.30-17.30	Semi-Lagrangian techniques for atmospheric modelling, current state and future challenges	Michail Diamantakis, ECMWF
19.00	*Seminar dinner*	

Thursday 5 September

9.15-10.15	Horizontally-explicit vertically-implicit (HEVI) time-stepping methods for NWP and climate models	Sarah-Jane Lock, ECMWF
10.15-10.45	*coffee break*	
10.45-11.45	Computational modes in weather and climate models	John Thuburn, Exeter University
11.45-12.45	Scale-dependent time integration and thermodynamic consistency for weakly compressible flows	Rupert Klein, Freie Universität Berlin
12.45-13.45	*lunch break*	
13.45-14.45	Deriving soundproof systems from variational principles	Darryl Holm, Imperial College
14.45-15.15	*coffee break*	
15.15-16.15	A unified framework for discrete integrations of compressible and soundproof PDEs of atmospheric dynamics	Piotr Smolarkiewicz, ECMWF
16.15-17.15	Blurring the boundary between dynamics and physics	Tim Palmer, University of Oxford
17.15	**Closure**	Erland Källén (ECMWF)