Last updated: Monday, 9 July 2018

3rd Workshop on Physics Dynamics Coupling (PDC18)

10 -12 July 2018

Programme

Tuesday 10 July		
08:30-09:15	***Registration***	**Weather Room**
09:15-09:30	Opening / welcome	Andy Brown (ECMWF)
Session 1	**Chair: Nigel Wood (Met Office)**	
09:30-10:30	A multi-fluid approach for the representation of convection	John Thuburn (University of Exeter)
10:30-11:00	***Coffee break***	
11:00-11:30	On the Coupling of the Compressible and Incompressible Navier-Stokes Equations	Fatemeh Ghasemi (LIU)
11:30-12:00	Variational-Metriplectic Formulations of Compressible, Multiphase, Multicomponent Geophysical Fluids	Christopher Eldred (AIRSEA, INRIA/Laboratoire Jean Kuntzmann)
12:00-12:30	Time integration methods and dynamic-physics coupling	Oswald Knoth (Leibniz Institute for Tropospheric Research)
12:30-13:00	Scalar Conservation Mapping in Physics Dynamics Coupling (PDC)	Timbwaoga Ouermi (University of Utah)
13:00-14:00	***Lunch break***	
Session 2	**Chair: Peter Lauritzen (NCAR)**	
14:00-15:00	An efficient integrated dynamics-physics coupling strategy for global cloud-resolving models	Shian-Jiann Lin (NOAA/Geophysical Fluid Dynamics Laboratory)
15:00-15:30	Assessing and Improving the Numerical Solution of Atmospheric Physics in an Earth System Model	Philip Rasch (Pacific Northwest National Laboratory)
15:30-16:00	***Coffee break***	
16:00-16:30	Analyzing Physics-Dynamics Coupling in an Ensemble of Simplified GCMs	Christiane Jablonowski (University of Michigan)
16:30-17:00	Reduced Complexity Frameworks for Exploring Physics Dynamics Coupling Sensitivities	Kevin Reed (Stony Brook University)

17:00-17:30	Physics coupling with the Finite-Volume Module of the IFS	Christian Kuehnlein (ECMWF)
17:30-18:00	REMOTE PRESENTATION: Evaluating time step and resolution sensitivities in the GEOS analysis and forecast system	Bill Putman (NASA)
18:00	***Ice breaker***	
Wednesday 11 July		
Session 3	**Chair: Anton Beljaars (ECMWF)**	
09:00-10:00	Across the 'grey zone' of ocean model resolutions	Helene Hewitt (Met Office Hadley Centre)
10:00-10:30	Representation of air-sea interactions on an idealized coupled atmosphere-ocean model with focus on the Western Baltic Sea	Tobias Bauer (Leibniz Institute for Tropospheric Research - TROPOS)
10:30-11:00	***Coffee break***	
11:00-11:30	Understanding couplings between the boundary layer and the large-scale dynamics	Robert Beare (University of Exeter)
11:30-12:00	On the spatial and temporal discretization of vertical diffusion in the turbulent planetary boundary layer	Florian Lemarié (INRIA, University Grenoble-Alpes)
12:00-12:30	Exploring the impacts of stochastic representations of model uncertainties	Sarah-Jane Lock (ECMWF)
12:30-13:00	Reduced numerical precision guided by physics-dynamics coupling	Matthew Chantry (Oxford University)
13:00-14:00	***Lunch break***	
Session 4	**Chair: Michail Diamantakis (ECMWF)**	
14:00-15:00	Physics-dynamics coupling with element-based high-order Galerkin methods: quasi equal-area physics grid	Peter Lauritzen (National Center for Atmospheric Research – NCAR)
15:00-15:30	Coupling convection with the continuity equation	Hillary Weller (University of Reading)
15:30-16:00	***Coffee break***	
16:00-16:30	Introducing net mass transport in the mass flux parametrisation of convection of the IFS	Sylvie Malardel (ECMWF)
16:30-17:00	Coupling isobaric physics with isochoric dynamics	Kohei Kawano (Japan Meteorological Agency)
17:30-18:30	***Poster session and pre-dinner drinks***	***Weather Room***
18:00	***BBQ Dinner***	
Thursday 12 July		
Session 5	**Chair: Nils Wedi (ECMWF)**	
09:00-09:30	The future of coupled modeling at the NWS	Hendrik Tolman (NOAA / NWS / Office of Science and Technology Integration)
09:30-10:00	Parallel Physics-Dynamics Coupling in an Atmosphere Model	Aaron Donahue (Lawrence Livermore National Laboratory)
10:00-10:30	Physics-dynamics coupling experiments in the UM	Terry Davies (Met Office)
10:30-11:00	***Coffee break***	**Lobby**

11:00-11:30	Convergence and performance aspects of physics-dynamics coupling in US-DOE research	Dorothy Koch (US Department of Energy)
11:30-12:00	Outcomes from the PDC sessions at the Second Pan-GASS meeting	Ben Shipway (Met Office)
12:00-12:30	Improving climate model coupling through complete mesh representation	Robert Jacob (Argonne National Laboratory)
12:30-13:00	***Poster session***	
13:00-14:00	***Lunch break***	
14:00-16:00	Discussion-Closing	