# 5th Workshop on Coupling Technologies for Earth System Models (CW2020)

IS-ENES3 has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N°824084

| Timestamp | Name | Affiliation | Title |
|---|---|---|---|
| ***Monday 21/09*** *Session 1 - Coupling technology latest developments I (chairs: Tony Craig, Bert Jagers)* | | | |
| 15h00-15h10 | Welcome | | |
| 15h10-15h30 | Sophie Valcke | Cerfacs | Latest developments of the OASIS3-MCT coupler for improved performance |
| 15h30-15h50 | Rocky Dunlap | NCAR | Update on the Earth System Modeling Framework |
| 15h50-16h10 | Li Liu | Tsinghua University | C-Coupler2: a flexible and user-friendly community coupler for model coupling and nesting |
| 16h10-16h30 | Moritz Hanke | German Climate Computing Center (Deutsches Klimarechenzentrum, DKRZ) | Update on YAC and an introduction to ICON-ESM |
| *Monday 16h30-16h50 : break* | | | |
| *Monday 21/09 Session 2 - Coupling technology latest developments II (chairs: Uwe Fladrich, Rocky Dunlap)* | | | |
| 16h50-17h10 | Vijay Mahadevan | Argonne National Laboratory | Couplers for E3SM: Comparisons between a fully online vs an offline-online remapping workflow |
| 17h10-17h30 | Robert Oehmke | National Center for Atmospheric Research | Earth System Modeling Framework Regridding Update |
| 17h30-17h50 | Nadine Wieters | Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research | esm-interface |
| 17h50-18h10 | Inti Pelupessy | Netherlands eScience Center | The Oceanographic Multipurpose Software Environment: introduction and applications. |
| 18h10-18h30 | Thomas Reerink | Research Software Engineer at KNMI supporting the EC-Earth consortium | Fast GCM - ice sheet model coupling software OBLIMAP 2.0, including on-line embeddable mapping routines. |
| *End of Monday 21/09* | | | |
| ***Tuesday 22/09*** *Session 3 - Coupling models in practice I (chairs: Steve Easterbrook, Sophie Valcke)* | | | |
| 15h00-15h20 | Uwe Fladrich | SMHI | EC-Earth 4: Flexible coupling ESM components for practical use |
| 15h20-15h40 | Tobias Bauer | Leibniz Institute for Tropospheric Research | The two-way online-coupled model ICONGETM: Regridding strategy and capabilities provided by the X-Grid structure from ESMF |
| 15h40-16h00 | Mariana Vertenstein | National Center for Atmospheric Research | CMEPS: Community Mediator for Earth Prediction Systems |
| *Tuesday 16h00-16h20 : break* | | | |
| *Tuesday 22/09 Session 4 - Computational performances of coupled models (chairs: Li Liu, Rob Jacob)* | | | |
| 16h20-16h40 | Yun He | Lawrence Berkeley National Laboratory | Process and Thread Affinity with MPI/OpenMP |
| 16h40-17h00 | Guillaume Mercier | Bordeaux INP/ Inria | HW topology management in Message-Passing based parallel applications. |

IS-ENES3 has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N°824084

| | | | |
|---|---|---|---|
| 17h00-17h20 | Samuel K. Gutierrez | Los Alamos National Laboratory | Adaptive Parallelism for Coupled, Hybrid Programs |
| 17h20-17h40 | Phil Jones | Los Alamos National Laboratory | Task Parallel Runtimes and Algorithmic Improvements for Coupled Earth System Models |
| 17h40-18h00 | Mario Acosta | Barcelona Supercomputing Center | Computational coupling cost evaluation: Challenges and solutions for the new generation of Earth System Models |
| *End of Tuesday 22/09* | | | |
| ***Wednesday 23/09*** *Session 5 – Data Assimilation and NWP (chairs: Kristian Mogensen, Andrea Piacentini)* | | | |
| 15h00-15h20 | Sylvie Malardel | Météo-France | Ocean-Wave-Atmosphere coupling with SURFEX and OASIS for mesoscale simulations and numerical weather prediction of tropical cyclones |
| 15h20-15h40 | Dan Copsey | Met Office | The development of coupled NWP forecasting at the Met Office and ocean forecast systems |
| 15h40-16h00 | Lars Nerger | Alfred Wegener Institute | Efficient Ensemble Data Assimilation for Earth System Models with the Parallel Data Assimilation Framework |
| 16h00-16h20 | Phil Browne | ECMWF | Coupling requirements for various flavours of coupled variational data assimilation at ECMWF |
| 16h20-16h40 | Sergey Skachko | Environment and Climate Change Canada, Meteorological Research Division | Coupled atmosphere-ocean data assimilation system in the Canadian global prediction system. |
| *Wednesday 16h40-17h00 : break* | | | |
| *Wednesday 23/09 Session 6 - Coupling models in practice II (chairs: Balaji, Sylvie Malardel)* | | | |
| 17h00-17h20 | Carsten Lemmen | Helmholtz-Zentrum Geesthacht | Modular System for Shelves and Coasts (MOSSCO) -- Science applications, unstructured representations, and particle dynamics. |
| 17h20-17h40 | Aurore Voldoire | CNRM, Météo-France/CNRS | Improving the river outflow coupling in a global climate model |
| 17h40-18h00 | Tom Clune | NASA GSFC Global Modeling and Assimilation Office | New Capabilities in MAPL |
| 18h00-18h20 | Hendrik Tolman | NOAA / NWS / Office of Science and Technology Integration | The Unified Forecast System (UFS); using community modeling to improve operations at NOAA. |
| 18h20-18h40 | Neil Barton | US Naval Research Laboratory | Coupling in the Navy Earth System Prediction Capability (Navy-ESPC) global coupled model |
| *End of Wednesday 23/09* | | | |
| ***Thursday 24/09*** *Session 7 - Coupling models in practice III (chairs: Mariana Vertenstein, Mario Acosta)* | | | |
| 15h00-15h20 | Einar Olason | The Nansen Center, Bergen, Norway | Coupling a moving-mesh to a fixed grid |
| 15h20-15h40 | Robin Smith | NCAS, University of Reading, UK | Moving the boundaries: coupling interactive ice sheets in UKESM |
| 15h40-16h00 | Nagaraju Chilukoti | National Institute of Technology (NIT) Rourkela, India | An assessment of potential climate impact during 1948- 2010 using historical land use land cover change maps |

IS-ENES3 has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N°824084

| | | | |
|---|---|---|---|
| 16h00-16h20 | Niels Drost | Netherlands eScience Center | Coupling Hydrological models through eWaterCycle |
| 16h20-16h40 | Slavko Brdar | Research Center Juelich | A New Atmosphere-Land Coupling in TerrSysMP: ICON and CLM3.5 |
| *Thursday 16h40-17h00 : break* | | | |
| *Thursday 24/09 Session 8 - Coupled model workflows (chairs: Aurore Voldoire, Carsten Lemmen)* | | | |
| 17h00-17h20 | Deniz Ural | Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research | ESM-Tools - A tool for Earth System Modelling |
| 17h20-17h40 | Arnaud Caubel | IPSL | CMIP6 at IPSL: a 4-year journey |
| 17h40-18h00 | Richard Hill | Met Office | Coupled model control systems: Problems = Opportunities |
| *End of Thursday 24/09* | | | |