

Workshop Agenda
Physics Dynamics Coupling in Weather and Climate Models
September 20-22, 2016, Richland, WA

Tuesday, Sept. 20

9:00-9:30 Opening remarks

Morning session: Examples of coupling issues

9:30-10:30	Xubin Zeng: (Keynote lecture) Examples of the dynamics-physics coupling in atmosphere, land, ocean, and sea ice models
10:30-11:00	Break
11:00-11:20	Colin Zarzycki: Errors in extreme winds due to choice of physics computation grid in high- resolution atmospheric simulations
11:20-11:40	Peter Lauritzen: Physics-dynamics coupling in CAM-SE
11:40-12:00	Robert Jacob: Solution transfer error in multi-physics coupling
12:00-12:20	Jinyun Tang: Example of poor land model performances resulting from asynchronous coupling of tightly coupled processes

12:20-13:30 Lunch

Afternoon session: Modeling and coupling frameworks

13:30-14:30	David Randall: (Keynote lecture) Physics-dynamics coupling in super-parameterized models
14:30-14:50	Rusty Benson: Coarse-grained component concurrency in Earth System modeling
14:50-15:10	Peter Caldwell: Improving throughput of the ACME climate model by parallel splitting atmospheric physics and dynamics
15:10-15:30	Lanning Wang: A loose coupling scheme for the dynamical core and physics suite of CAM5.1
15:30-15:50	Zhenya Song: CESMTuner: Model-based process scheduling for long-term simulation of coupled climate system model

15:50-17:00 Poster viewing with refreshments

17:30 Transport and reception

Wednesday, Sept. 21

Morning session: Experiences at Weather Forecast Centers

9:00-10:00	Anton Beljaars: (Keynote lecture) Experience at ECMWF with physics-dynamics coupling
10:00-10:20	Qiyang Chen: Charney-Phillips vertical discretizations for physics in GRAPES_GFS model
10:20-10:40	Hongliang Zhang: Iteration scheme of physics and dynamics coupling in GRAPES_GFS
10:40-11:00	Break
11:00-12:00	Günther Zängl: (Keynote lecture) The Icosahedral Nonhydrostatic (ICON) modelling system: physics-dynamics coupling and related aspects
12:00-12:20	Christiane Jablonowski: Gaining insight into the physics dynamics coupling via DCMIP idealized test cases

12:20-13:30 Lunch

Afternoon: LIGO tour

17:00-18:00 Organizing Committee meeting

Thursday, Sept. 22

Morning session: Towards Future Models

9:00-10:00	Alison Stirling: (Keynote lecture) Designing convection schemes to take account of convective-dynamics coupling
10:00-10:20	Sylvie Malardel: Can we model unresolved effective mass transport in a NWP model?
10:20-10:40	Jun-ichi Yano: Subgrid-scale parameterization and numerical algorithm
10:40-11:00	Break
11:00-11:20	Wojciech Grabowski: Modeling condensation in nonhydrostatic cloud-scale models
11:20-11:40	Kohei Kawano: Effort to improve the consistency in physics-dynamics coupling in the finite volume method
11:40-12:00	Song-You Hong: Investigation of diabatic heating effects in a nonhydrostatic regional model
12:00-12:20	Ben Shipway: Coupling finite difference physics parametrizations to a mixed finite element dynamical core

12:20-13:30 Lunch

Afternoon session: From a mathematical perspective

13:30-14:30	Daniel Hodyss: (Keynote lecture) The impact of noisy physics on physics-dynamics coupling
14:30-14:50	Hui Wan: Understanding the cause of poor time step convergence in a large-scale condensation parameterization
14:50-15:10	Bill Spatz: ACME-SM: A global model software modernization surge

15:10-15:30 Closing remarks