

Physics Dynamics Coupling in Weather and Climate Models
Sept. 20-22, 2016, Richland, WA, USA

60-minute Keynote Lectures

Author Name(s)	Affiliation	Title
Xubin Zeng	U. Arizona, USA	Examples of the dynamics-physics coupling in atmosphere, land, ocean, and sea ice models
David Randall	CSU, USA	Physics-dynamics coupling in super-parameterized models
Anton Beljaars	ECMWF, UK	Experience at ECMWF with physics-dynamics coupling
Günther Zängl	DWD, Germany	The Icosahedral Nonhydrostatic (ICON) modelling system: physics-dynamics coupling and related aspects
Alison Stirling	Met Office, UK	Designing convection schemes to take account of convective-dynamics coupling
Daniel Hodyss	NRL, USA	The impact of noisy physics on physics-dynamics coupling

20-minute Oral Presentations

Author Name(s)	Affiliation	Title
Jun-Ichi Yano	CNRM, Meteo France	Subgrid-Scale Parameterization and Numerical Algorithm
Ben Shipway	Met Office, UK	Coupling finite difference physics parametrizations to a mixed finite element dynamical core
Robert Jacob, Vijay Mahadevan	ANL, USA	Solution transfer error in multi-physics coupling
Colin M. Zarzycki	NCAR, USA	Errors in extreme winds due to choice of physics computation grid in high-resolution atmospheric simulations
Qiyang Chen, Jiong Chen, Kun Liu, Liping Huang and Yong Su	CMA, China	Charney-Phillips vertical discretisations for physics in GRAPES_GFS model
Sylvie Malardel	ECMWF, UK	Can we model unresolved effective mass transport in a NWP model?
Kohei Kawano	JMA, Japan	Effort to improve the consistency in physics-dynamics coupling in the finite volume method
Jihyeon Jang, Song-You Hong	KIAPS, Korea	Investigation of Diabatic Heating Effects in a Nonhydrostatic Regional Model
Wojciech W. Grabowski	NCAR, USA	Modeling condensation in nonhydrostatic cloud-scale models
Peter Caldwell	LLNL, USA	Improving Throughput of the ACME Climate Model by Parallel Splitting Atmospheric Physics and Dynamics
Lanning Wang, Yishuang Liang, Haohuan Fu	BNU, China	A Loose Coupling Scheme for the Dynamic Core and the Physics Suite of CAM 5.1
Wei Xue, Song Zhenya	Tsinghua University, China	CESMTuner: Model-based Process Scheduling for Long-term Simulation of Coupled Climate System Model
Rusty Benson	GFDL, USA	Coarse-grained component concurrency in Earth System modeling
Hongliang Zhang, Jianglin Hu, Qiyang Chen	CMA, China	Iteration scheme of physics and dynamics couple in GRAPES_GFS
Hui Wan, Phil Rasch	PNNL, USA	Understanding the cause of poor time step convergence in a large-scale condensation parameterization
Jinyun Tang, William J. Riley	LBNL, USA	Example of poor land model performances resulting from asynchronous coupling of tightly coupled processes
Christiane Jablonowski, Paul Ullrich, Colin Zarzycki, Kevin Reed, James Kent, Peter Lauritzen and Ram Nair	U. Michigan, USA	Gaining Insight into the Physics-Dynamics Coupling via DCMIP Idealized Test Cases
William F. Spotz	SNL, USA	ACME-SM: A Global Model Software Modernization Surge
Peter Lauritzen	NCAR, USA	Physics-dynamics coupling in CAM-SE

Posters

Author Name(s)	Affiliation	Title of Presentation
Aaron S Donahue	LLNL, USA	Understanding the Impact of Process Ordering Within ACME
Chun Zhao	PNNL, USA	Exploring the impacts of physics and resolution on aqua-planet simulations from a non-hydrostatic global variable-resolution modeling framework
Guoqiang Xu	CMA, China	Incorporation of a Cumulus Fraction Scheme in the GRAPES_Meso and Evaluation of Its Performance
Panos Stinis	PNNL, USA	When big computers are not enough
Yanli Tang, Lijuan Li, Wenjie Dong, Bin Wang	IAP/CAS, China	Tracing the source of ENSO simulation differences to the atmospheric component of two CGCMs
Marco Giorgetta	MPI-M, Germany	Coupling parameterized mass changes to dynamics
Eugene Mirvis	EMC/NCEP/NOAA, USA	Some Approaches to the HPC Load Balancing and Parametrical Grid Control In Weather and Climate Prediction Models