CESM OCEAN MODEL
WINTER WORKING GROUP MEETING

February 8-10 2023

Wednesday, February 8 (Joint with Biogeochemistry Working Group)

** All times are MST; **Speakers**: please leave 5 min at the end of your slot for questions.*

Time	Topic	Speakers
Mesa Lab Main Seminar Room and Hybrid		
13:30	Reduced CO2 uptake and nutrient sequestration from slowing overturning circulation	Yi Liu
13:45	Ecosystem composition and biogeochemical cycles: Community Earth System Model Simulations with multiple plankton functional types	Jun Yu
14:00	Title ? (phytoplankton group specific, fully variable C:N:P:Fe:Si)	Nicola Wiseman
14:15	***Break***	
14:30	Implementing a satellite emulator in CESM2 to evaluate the impact of clouds on ocean chlorophyll observations	Genevieve Clow
14:45	Skillful predictions of ecosystem stressors in the surface and subsurface ocean	Samuel Mogen
15:00	***Wrap-up Discussion***	
15:20	***ADJOURN***	

Wednesday, February 8 (Extra Event of Interest)

University of Colorado Physics Department Colloquium

"Waves Affect and Detect Climate"
Dr. Baylor Fox-Kemper, Brown University

16:00-17:00 in the JILA Auditorium (1900 Colorado Ave)
https://www.colorado.edu/physics/events/seminars-and-colloquia/spring-2023-colloquium-schedule

Thursday, February 9

** All times are MST; **Speakers**: please leave 5 min at the end of your slot for questions.*

Time	Topic	Speakers
Mesa Lab Main Seminar Room and Hybrid		
8:30	***Welcome and logistics***	
	Ocean and Climate Diagnostics	
8:40	Frequency dependence of ocean kinetic energy and its change over the period 1983-2018	Nuno Serra
9:00	The SubAntarctic Zone - Water Mass Formation and climate change	Justin Small
9:20	Antarctic Ice Sheet discharge drives long-term, large scale Southern Ocean circulation changes	Tessa Gorte
9:40	Exceptional multi-year prediction skill of the Kuroshio Extension in a high-resolution decadal prediction system	Who Kim
10:00	South Atlantic heat balance in a warming climate	Maurício Rebouças Rocha
10:20	***BREAK***	
	Ocean Model Development	
10:40	Insights from developing a coarse-resolution configuration of MOM6	Willem Huiskamp
11:00	Parameterizing Vertical Turbulent Mixing Coefficients In The Ocean Surface Boundary Layer Using Neural Networks (Implemented in MOM6)	Aakash Sane
11:20	Learning Ocean Model Errors from Data Assimilation Increments	Tarun Verma
12:00	***LUNCH BREAK***	
13:00	HYCOM1 vs HYBGEN for ALE Regridding	Alan Wallcraft
13:20	Utilizing CESM Simple Models Toolkit for Idealized MOM6 Applications	Alper Altuntas
13:40	Progress and Plans - CESM/MOM6	Gustavo Marques
14:00	***Discussion - Towards the CESM3 MOM6 Release***	
14:20	***BREAK***	
	Regional Ocean Modeling	
14:40	Using iHESP to Drive a Coastal Model for Detailed Inundation	Baylor Fox-Kemper
15:00	Modeled coastal-ocean pathways of land-sourced contaminants in the aftermath of Hurricane Florence and future extreme precipitation scenarios	Melissa Moulton
15:20	Regional MOM6/CESM configuration for the Caribbean Sea	Giovanni Seijo
15:40	***Discussion - Regional Ocean Modeling in CESM***	
16:00	***ADJOURN***	
16:30	***Unofficial gathering at Southern Sun Brew Pub***	

Friday February 10

** All times are MST;* ***Speakers****: please leave 5 min at the end of your slot for questions.*

Time	Topic	Speakers
8:55	***Welcome and Logistics***	
	Regional Ocean Modeling (continued)	
9:00	High-resolution regional ocean modeling: Coupling ROMS to E3SM	Robert Hetland
	Diapycnal Mixing and Ocean Boundary Layer Parameterization	
9:20	Evaluating vertical mixing scheme performance using mixing observations	Deepak Cherian
9:40	Improved upper ocean vertical mixing parameterization for simulating the tropical Pacific Ocean in climate models	Brandon Reichl
10:00	Seasonal and subseasonal variability of diabatic upwelling in the tropical Pacific Cold Tongue	Anna-Lena Deppenmeier
10:20	***BREAK***	
10:40	Development and calibration of a turbulent-kinetic-energy-based boundary layer turbulence closure	Gregory Wagner
11:00	Recent development of a wavy ocean boundary layer parameterization for MOM6	Bill Large
11:20	A Particle-In-Cell Wave model for efficient sea-state and swell estimates in coupled models	Momme Hell
11:40	***Discussion - Waves, PBL parameterization***	
12:00	***LUNCH BREAK***	
	Mesoscale and Submesoscale Parameterization	
13:00	A Data-Driven Approach for the Submesoscale Parameterization	Abigail Bodner
13:20	An investigation of eddy-driven recirculations in an idealized western boundary current	Stuart Bishop
13:40	A backscatter-only parameterization for mesoscale eddies	Elizabeth Yankovsky
14:00	Scale-dependent vertical structure of mesoscale eddy kinetic energy in an idealized isopycnal ocean model	Wenda Zhang
14:20	Data-driven stochastic parameterizations of subgrid mesoscale eddies in an idealized ocean model	Pavel Perezhogin
14:40	***Discussion - Eddy parameterization and wrap-up***	
15:00	***ADJOURN***	