CESM Land Model & Biogeochemistry
WINTER WORKING GROUP MEETING
February 2024

Tuesday, February 27

** All times are MST; **Speakers**: please prepare a 15 minute talk and leave 3 min at the end of your slot for questions.*

Time	Topic	Speakers
Land Model and Biogeochemistry Working Groups *Mesa Lab Main Seminar Room & Hybrid*		
9:00	**Welcome and logistics**	
9:05	LMWG Overview & Discussion	Will Wieder
9:30	**Discussion**	
9:40	Bomb radiocarbon evidence for strong global carbon uptake and fast turnover in terrestrial vegetation (remote)	Heather Graven
10:00	The influence of land carbon cycle representation on terrestrial sink sensitivity, total warming, and global carbon budgets (remote)	Greta Shum
10:20	Land updates for CMIP7	Dave Lawrence
10:30	**Discussion**	
10:40	**Coffee Break In person and virtual**	
CGD Seminar *Mesa Lab Main Seminar Room & Hybrid*		
11:10	**CGD Seminar** - A case for an emissions driven approach for projecting future climate Youtube link: https://www.youtube.com/c/NCARCGD Questions on Slido.com	Abigail Swann
12:00	**Lunch (on your own)**	
Land Atmosphere Interactions *Mesa Lab Main Seminar Room & Hybrid*		
13:20	Assessing the sensitivity of atmospheric convective updrafts to subgrid land surface heterogeneity in CESM2	Meg Fowler
13:40	Atmospheric modulation of evapotranspiration depends on climatological moisture regime	Claire Zarakas
14:00	The global hydrologic response to land evapotranspiration-driven warming	Ben Buchovecky
14:20	Future increases in Amazonia water stress from CO_2 physiology and deforestation	Yue Li
14:40	**Discussion**	
14:50	**Break**	
15:20	Understanding plant carbon-water tradeoffs in a coupled Earth system (remote)	Amy Liu
15:40	Characterizing ENSO teleconnections impacts on GPP across CMIP6 Earth	Maria Salazar

	System Models	
16:00	Nudging: a novel way of capturing atmospheric feedbacks to (ridiculously large) Arctic vegetation change	Marysa Lague
16:20	Advancing the representation of land-based climate mitigation in Earth system models	Anna Harper
16:40	Building an emissions driven climate impacts modeling framework using CESM 2.1.5 on Derecho	Peter Lawrence
17:00	**Discussion**	
17:15	***Adjourn***	

Wednesday, February 28

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Time	Topic	Speakers
Hydrology & Urban ***Mesa Lab Main Seminar Room & Hybrid***		
9:00	**Welcome and logistics**	
9:05	Energy and water balance of glaciated watersheds using CLM-hillslope Hydrology (remote)	Samar Minallah
9:25	Impact of snow thermal conductivity schemes on pan-Arctic soil temperature in CLM5.0 simulations (remote)	Adrien Damseaux
9:45	The response of global forest evapotranspiration to canopy height (remote)	Hangkai You
10:05	Revise soil water retention curve in CTSM via NCAR-NEON system	Jie Hu
10:25	**Discussion**	
10:30	**Break**	
11:00	Effects on the simulated hydraulic stress of different representations of a mixed forest in Luxembourg (remote)	Cesar D. Jimenez-Rodriguez
11:20	Comparison of global river runoff simulations between mizuRoute and MOSART	Naoki Mizukami
11:40	Enhancing Urban Climate-Energy Modeling in CESM through Explicit Representation of Urban Air-conditioning Adoption	Xinchang "Cathy" Li
12:00	Advancing urban representation in CESM to understand urban climate at large scales	Lei Zhao
12:20	**Discussion**	
12:40-13:30	**Optional DEI lunch discussion in Damon Room & Google Meet**	
12:30	**Lunch (on your own)**	

Biogeochemistry, Fire & Crop ***Mesa Lab Main Seminar Room & Hybrid***		
13:40	CO_2 Increases Drive Enhanced Fire Activity due to the CO_2 Fertilization Effect and Vegetation Dynamics	Robert Allen
14:00	Do microbial communities matter for modeling temperate forest litter decomposition?	Katie Rocci
14:20	When is a trend meaningful? Insights to carbon cycle variability from the CESM2 large ensemble	Gordon Bonan
14:40	Plant functional trait uncertainty drives variability in productivity responses to climate change across an alpine tundra hillslope	Katya Jay
15:00	**Discussion**	
15:10	**Coffee Break In person and virtual**	
15:30	Agrivoltaic Systems as a solution to sustainable co-production of agriculture and energy: Insights from a new process-based agrivoltaics module in a land surface model (remote).	Mengqi Jia
15:40	Reactive nitrogen emissions from agriculture: Model and Mesocosm experiments	Jinmu Luo
16:00	Updates to the crop model for CLM6	Sam Rabin
16:20	**Discussion**	
16:40	**Adjourn**	

Thursday, February 29

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Time	Topic	Speakers
Model Parameterization & Calibration ***Mesa Lab Main Seminar Room & Hybrid***		
9:00	**Welcome and logistics**	
9:05	Improving the representation of major Indian crops in Community Land Surface Model version 5.0 (CLM5) using site-scale crop dataset and evaluating the impact on surface fluxes (remote)	K Narender Reddy
9:25	Improving forecasts of land surface processes using CLM-DART (remote)	Brett Raczka
9:45	Computationally efficient method for predicting evapotranspiration using a Gaussian Process Regression Emulator (remote)	Thomas Kavoo
10:05	Evaluating hydrological parameter sensitivities in CTSM using large-sample watershed modeling in CONUS	Guoqiang Tang
10:25	**Discussion**	
10:30	**Break**	
11:00	Carbon cycle futures in the PPE-verse	Daniel Kennedy
11:20	Constraining parametric uncertainty in the Community Land Model	Linnia Hawkins

11:40	Towards a robustly calibrated FATES SP configuration: Progress down the calibration cascade	Adrianna Foster
12:00	**Discussion**	
12:20	**Lunch (on your own)**	
FATES ***Mesa Lab Main Seminar Room & Hybrid***		
13:30	FATES development plans and progress (remote)	Gregory Lemieux
13:50	Efficiency discussion and two-stream radiation in FATES (remote)	Ryan Knox
14:10	Vertical scaling of leaf maintenance respiration in FATES (remote)	Jessie Needham
14:30	Towards coexistence: data-driven FATES simulations across the Amazon (remote)	Jennifer Kowalczyk
14:50	Land Use updates in FATES (remote)	Charlie Koven
15:10	**Discussion**	
15:30	**Adjourn**	