

Community Earth System Model (CESM) Tutorial
NCAR Mesa Lab, Boulder, CO
6-10 August 2018

Main Seminar Room – morning lectures & practical intro
Damon Room / Library – afternoon practical labs

Monday, August 6

- 8:30-8:50 Welcome, Intro, Logistics ([Hannay](#), [Brinkworth](#), [Lamarque](#), [Ballard](#))
8:50-9:40 Lecture 1: Introduction to the coupled system ([Danabasoglu](#))
9:40-9:55 *Break*
9:55-10:45 Lecture 2: Atmosphere Modeling I: Intro & Dynamics ([Lauritzen](#))
10:45-11:00 *Break*
11:00-11:50 Lecture 3: Atmosphere Modeling II: Physics ([Bacmeister](#))
- 11:50-1:10 Lunch (*on your own*)
- 1:10-1:30 Introduction to NCAR computing environment ([Kelly](#))
1:30-2:40 Practical Intro 1: Run CESM ([Bertini](#))
2:40-5:00 Practical Lab 1 (snacks available in Damon room)
5:00-6:50 Reception: Mesa Lab Cafeteria (Ice breaker)

Tuesday, August 7

- 8:30-8:55 Lecture 4a: Atmosphere Modeling III: WACCM ([Mills](#))
8:55-9:20 Lecture 4b: Atmos. Modeling IV: Chemistry, Aerosols ([Tilmes](#))
9:20-9:35 *Break*
9:35-10:25 Lecture 5: Land Modeling I: Biogeophysics ([D. Lawrence](#))
10:25-10:40 *Break*
10:40-12:00 Applications 1
 - *Going to extremes in the "New Arctic" ([Landrum](#))*
 - *What have I learned from CESM large ensemble experiments? ([Teng](#))*
 - *Global responses in idealized climate model experiments ([Medeiros](#))*
 - *Evaluating terrestrial biogeochemistry in CLM ([Wieder](#))*
- 12:00-1:30 Lunch (*on your own*)
1:00-1:30 Specialized Talk 1: Simpler Models ([Simpson](#))
- 1:30-2:20 Practical Intro 2: Run CESM: Simple Modifications ([Shields](#))
2:20-5:00 Practical Lab 2 (snacks available in Damon room)

Wednesday, August 8

- 8:30-9:20 Lecture 6: Land Modeling II: Biogeochemistry: Ecosystem Modeling ([Lombardozi](#))
9:20-9:35 *Break*

- 9:35-10:25 Lecture 7: Ocean Modeling I (**Bates**)
 10:25-10:40 *Break*
 10:40-12:00 Applications 2
 - *Using the high resolution CESM to study tropical storms* (**Rosenbloom**)
 - *Climate and Carbon impacts of Land Use and Land Cover Change in CESM* (**P Lawrence**)
 - *Precipitation, Convection and Variability: Frightening yet fascinating* (**Neale**)
 - *Understanding the climate extremes of 55 million years ago with CESM and data* (**Shields**)
- 12:00-1:30 Lunch (*on your own*)
 1:00-1:30 Specialized Talk 2: Model development: Coupling/Tuning (**Hannay**)
- 1:30-2:20 Practical Intro 3: Diagnostics and Output (**Phillips**)
 2:20-5:00 Practical Lab 3 (snacks available in Damon room)

Thursday, August 9

- 8:30-9:20 Lecture 8: Ocean Biogeochemistry (**Long**)
 9:20-9:35 *Break*
 9:35-10:25 Lecture 9: Land Ice Modeling (**Lipscomb**)
 10:25-10:40 *Break*
 10:40-11:30 Lecture 10: Sea Ice Modeling (**DuVivier**)
- 11:30-1:30 Lunch (*on your own*)
 11:45-12:45 Meet a CESM Scientist (Scientists: **TBD**)
 1:00-1:30 Specialized Talk 3: Porting Session (**Edwards**)
- 1:30-2:20 Practical Intro 4: Namelist and Code Modifications (**Hannay**)
 2:20-5:00 Practical Lab 4 (snacks available in Damon room)

Friday, August 10

- 8:30-9:20 Lecture 11: Ocean Modeling II (**Gent**)
 9:20-9:35 *Break*
 9:35-10:25 Applications 3: Using CESM to understand ENSO teleconnections (**Deser**)
 10:25-10:30 Closing Remarks (**Hannay**)
 10:30 Photo (*meet outside Main Seminar Room*)
 10:30-10:45 *Break*
 10:45-11:35 Practical Intro 5:
 Breakouts: Ocean/Sea Ice/Land Ice (**Altunas, Bailey, Sacks/Leguy**) Director's
 Land/BGC (**Oleson, Kluzek, Long**) Chapman/Damon
 Atm/Chem/WACCM (**Coleman, Tilmes, Mills**) Main Seminar Room
- 11:35-12:30 Lunch (*on your own*)
- 12:30-3:00 Practical Lab 5