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
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 (Lombardozzi)
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)
10:25-10:40 Closing Remarks (Hannay)

11:35-12:30 Lunch (on your own)

12:30-3:00 Practical Lab 5