2013 ASP Graduate Student Colloquium: Carbon-Climate Connections in the Earth System

National Center for Atmospheric Research, Boulder, Colorado

Agenda

Sunday, 28 July	
18:00-20:00	Reception/introductions @ Zolo Grill (2525 Arapahoe Ave)
Monday, 29 July	NCAR Fleischmann Building - Walter Orr Roberts Board Room (lower level - enter from outside)
8:00	Bus pickup - Millennium Hotel
08:30-09:00	Matthew Long - Introductions
09:00-09:55	David Schimel - Carbon and climate on geologic timescales
09:55-10:15	Break - ML FB Board Room
10:15-11:10	Peter Gent - A history of coupled climate modeling
11:10-12:05	Britton Stephens - The global carbon cycle as seen by the atmosphere
12:05-13:05	Lunch - On your own (ML Cafeteria)
13:05-14:05	Susan Solomon - Radiative forcing by anthropogenic constituents
14:05-15:00	Inez Fung - Modeling the global carbon cycle
15:00-15:20	Mark Moore & Peter Buss - Computing setup
15:20-15:40	Break - ML FB Board Room
15:40-16:35	Keith Lindsay - Tools for analyzing climate model output I
16:35-17:30	Group - Introduction to projects
17:30	Bus return
Tuesday, 30 July	NCAR Fleischmann Building - Walter Orr Roberts Board Room (lower level - enter from outside)
8:00	Bus pickup - Millennium Hotel
08:30-09:25	Susan Solomon - Cumulative emissions and the long tail of carbon removal
09:25-10:20	Gordon Bonan - Characterization of the terrestrial environment
10:20-10:40	Break - ML FB Board Room
10:40-11:35	Gordon Bonan - Modeling Terrestrial ecosystems: Biogeophysics/canopy processes
11:35-12:30	Ying-Ping Wang - Global nitrogen and phosphorus cycles
12:30-13:30	Lunch - On your own (ML Cafeteria)
13:30-14:25	David Schimel - Modeling Terrestrial ecosystems: Biogeochemistry/feedbacks
14:25-14:45	Break - ML FB Board Room
14:45-16:00	Keith Lindsay - Tools for analyzing climate model output II
16:00-17:30	Projects
17:30	Bus return
Wednesday, 31 July	NCAR Fleischmann Building - Walter Orr Roberts Board Room (lower level - enter from outside)
8:00	Bus pickup - Millennium Hotel
08:30-09:25	Matthew Long - Ocean carbon biogeochemistry: thermodynamics, carbon chemistry, gas exchange
09:25-10:20	Inez Fung - Conceptualizing and quantifying climate-carbon feedback
10:20-10:40	Break - ML FB Board Room
10:40-12:10	Fung/Schimel/Doney/Long - Hands-on sesssion: Coupled carbon-climate system

12:10-13:10	Lunch - On your own (ML Cafeteria)
13:10-14:30	Fung/Schimel/ Doney/Long - Hands-on sesssion: Coupled carbon-climate system
14:30-14:45	Break - ML FB Board Room
14:45-15:40	Galen McKinley - Ocean carbon biogeochemistry: Productivity, export, remineralization
15:40-16:35	Scott Doney - Marine ecosystem modeling I
16:35-17:30	Ben Houlton - Fundamentals of nutrient limitation: Consilience of plant ecophysiology and
17:30	Bus return

Thursday, 1 August	NCAR Fleischmann Building - Walter Orr Roberts Board Room (lower level - enter from outside)
8:00	Bus pickup - Millennium Hotel
08:30-09:25	Annalisa Bracco - Global overturning circulation
09:25-10:20	Scott Doney - Marine ecosystem modeling II
10:20-10:40	Break - ML FB Board Room
10:40-12:00	Doney/McKinley - Hands-on session: Modeling marine ecosystems
12:00-13:00	Lunch - On your own (ML Cafeteria)
13:00-13:55	Matthew Long - Ocean uptake of anthropogenic CO_2: Capacity, kinetics, biology
13:55-14:50	Galen McKinley - Climate interactions and feedback in the ocean carbon cycle
14:50-15:10	Break - ML FB Board Room
15:10-16:05	Ben Houlton - Frontiers in global nutrient cycles: Questions, opportunities and techniques
16:05-17:30	Open project time
17:30	Bus return

Friday, 2 August	NCAR Fleischmann Building - Walter Orr Roberts Board Room (lower level - enter from outside)
8:00	Bus pickup - Millennium Hotel
08:30-09:25	Annalisa Bracco - Upper ocean physics
09:25-10:20	Scott Doney - Phytoplankton ecology
10:20-10:40	Break - ML FB Board Room
10:40-11:35	Inez Fung - Inferring fluxes from atmospheric observations
11:35-12:30	David Schimel - FluxNet data and scaling
12:30-13:30	Lunch - On your own (ML Cafeteria)
13:30-14:30	Schimel/Fung/Stephens/Chatterjee - Hands-on session: Flux constraints
14:30-15:00	Break - ML FB Board Room
15:00-17:00	Schimel/Fung/Stephens/Chatterjee - Hands-on session: Flux constraints
17:00	Bus return

Saturday, 3 August	
08:00-17:00	Rocky Mountain National Park excursion

Monday, 5 August	NCAR Mesa Lab (morning) & Fleischmann Building Board Room (afternoon)
8:00	Bus pickup - Millennium Hotel
08:30-09:25	Will Weider - Soil decomposition
09:25-10:25	Deutsch - Hands-on session: Coupled-carbon cycle model
10:25-10:45	Break - ML Outside of Main Seminar Room

10:45-12:15	Deutsch - Hands-on session: Coupled-carbon cycle model
12:15-13:15	Lunch - On your own (ML Cafeteria)
13:15-14:10	Jim Randerson - Fire and climate
14:10-15:00	Projects - Fleischmann Building
15:00-15:30	Break - ML FB Board Room
15:30-17:30	Projects - Fleischmann Building
17:30	Bus return

Tuesday, 6 August	NCAR Mesa Lab
8:00	Bus pickup - Millennium Hotel
08:30-09:25	Clara Deser - Natural variability in the climate system
09:25-10:20	Samuel Levis - Land-use and carbon cycling
10:20-10:40	Break - ML Outside of Main Seminar Room
10:40-11:35	Jim Randerson - Disturbance and land use change processes: impacts on carbon fluxes in terrestrial ecosystems
11:35-12:30	Rosie Fisher - Community dynamics and climate
12:30-13:30	Lunch - On your own (ML Cafeteria)
13:30-14:45	Project time and proposal presentations
14:45-15:00	Break - ML Outside of Main Seminar Room
15:00-16:00	Project time and proposal presentations
16:00	Bus return

ASP Researcher Workshop, 6-10 August 2013

18:45	Bus pickup -Boulder Inn
19:00-19:30	Reception for Researcher Workshop - Millennium Hotel (Millennium Room)
19:30-21:00	Introduction of organizers and objectives of the workshop
21:00	Bus return

Wednesday, 7 August	NCAR Mesa Lab
7:30	Bus pickup - Millennium Hotel & Boulder Inn
8:00-8:15	Quinn Thomas - Welcome
	Carbon Cycle Overview
8:15-9:15	Jim Randerson - The state of the carbon cycle in CMIP5 models: Processes, feedbacks, and future research directions
9:15-10:15	Ning Zeng - The changing seasonal cycle of atmospheric CO_2
10:15-10:45	Break - ML Outside of Main Seminar Room
10:45-11:45	Taka Ito - Physical and biological controls on the ocean carbon storage
11:45-12:45	Ying Ping Wang - Effects of Nutrient limitation on land carbon uptake and its implications on climate change prediction and mitigation
12:45-13:45	Lunch - On your own (ML Cafeteria)
13:45-14:45	Phillipe Ciais - Challenges in soil carbon modeling and links to the river carbon cycle
	Nutrient Cycling Controls and Impacts on Carbon Cycling
14:45-15:45	Curtis Deutsch - Climate regulation of the oceanic N cycle
15:45-16:15	Break - ML Outside of Main Seminar Room
16:15-16:55	Sara Vicca - Nutrient availability determines forests' carbon sequestration - A global synthesis
16:55-17:35	Anna Cabre - Southern Ocean response to climate change in the CMIP5 models

17:35-19:00	**Poster Session I - ML Outside of Main Seminar Room (drinks & appetizers)**
	- Remineralization and nutrient cycling controls
	- Carbon cycle I - CMIP5 and continental to global carbon flux estimates
19:00	Bus return
Thursday, 8 August	NCAR Mesa Lab
7:30	Bus pickup - Millennium Hotel & Boulder Inn
	Remineralization Pathways and Controls
8:00-9:00	Adrian Burd - The fate of particulate organic material in the oceans
9:00-10:00	Serita Frey - Terrestrial ecosystem carbon dynamics: Effects of heterotrophic respiration
10:00-10:30	Break - ML Outside of Main Seminar Room
10:30-11:10	Christian Lønborg - Dissolved organic matter (DOM) - microbe interactions
11:10-11:50	Tom Vanwelleghem - Towards modeling global soil erosion and its importance for the terrestrial carbon cycle
11:50-13:00	Lunch - On your own (ML Cafeteria)
	Role of Individuals in Ecosystem Dynamics
13:00-14:00	Rosie Fisher -
14:00-15:00	Tim Lenton - Capturing evolution and ecology in a global ocean model
15:00-15:40	Sophie Fauset - Modeling tropical forest dynamics using an individual-based forest simulator
15:40-16:10	Break - ML Outside of Main Seminar Room
16:10-16:50	David Nicholson - A cellular allocation modeling approach for representing the ecophysiology of marine primary producers
16:50-19:00	Break-out
19:00-20:45	Group Reception/Dinner (ML Tree Plaza)
20:45	Bus return
Friday, 9 August	NCAR Mesa Lab
7:30	Bus pickup - Millennium Hotel & Boulder Inn
	Data to Constrain Carbon Cycle Feedbacks: Assimilation, Metrics, Parameter Estimation, Inverse Methods, Etc.
8:00-9:00	Galen McKinley - Using data to elucidate feedback mechanisms in the ocean carbon cycle
9:00-9:40	Kevin Bowman - The NASA Carbon Monitoring System
9:40-10:40	Kiona Ogle - Strategies for applying individual-based models of forest dynamics at regional to continental scales
10:40-11:00	Break - ML Outside of Main Seminar Room
	Role of Physical Climate Variability
11:00-12:00	Jeff Chambers -
12:00-12:40	Charles Koven - Modeling terrestrial carbon-slimate dynamics in the northerh high latitudes
12:40-13:40	Lunch - On your own (ML Cafeteria)
13:40-14:40	Nicole Lovenduski - Carbon in the southern ocean: Known knowns and known unknowns
14:40-15:20	Rondrotiana Barimalala - Representation of the Indian Ocean biophysical interannual variability in the CMIP5-ESM models
15:20-15:40	Break - ML Outside of Main Seminar Room
	Ecosystem Dynamics New Horizons

15:40-16:40		Tom Anderson - Role of zooplankton in marine ecosystems and modeling perspectives
16:40-17:40		Jeff Hicke - The role of biotic disturbance agents in carbon-climate connections
18:00-19:00		**Poster Session II - ML Outside of Main Seminar Room (drinks & appetizers)**
		- Carbon cycle II - Local processes and regional flux estimates
		- New modeling approaches and the use of data to constrain carbon cycle feedbacks
	19:00	Bus return
Saturday, 10 August		Millennium Hotel, Century Room
	8:00	Bus pickup at Boulder Inn
8:30-10:30		Break-out Groups
10:30-11:30		Concluding remarks
12:00		End
	12:00	Bus return
Monday, 12 August		NCAR Foothills Lab, Building 2 (FL2)
	8:00	Bus pickup - Millennium Hotel
08:30-09:30		Nikki Lovenduski - Key biomes: Southern Ocean
09:30-10:30		Curtis Deutsch - Glacial/interglacial CO_2 variability
10:30-11:00		Break - Inside old COMET Classroom (Now MMM Classroom @ FL2-1024)
11:00-12:30		Projects
12:30-13:30		Lunch - On your own (FL2 Cafeteria)
13:30-15:30		Projects
15:30-16:00		Break - Inside old COMET Classroom (Now MMM Classroom @ FL2-1024)
16:00-17:30		Projects
	17:30	Bus return
Tuesday, 13 August		NCAR Foothills Lab, Building 2 (FL2)
	8:00	Bus pickup - Millennium Hotel
08:30-09:30		Curtis Deutsch - Marine N cycle
09:30-10:30		David Schimel - Benchmarking modeled carbon-climate feedbacks
10:30-11:00		Break - Inside old COMET Classroom (Now MMM Classroom @ FL2-1024)
11:00-12:30		Projects
12:30-13:30		Lunch - On your own (FL2 Cafeteria)
13:30-15:30		Projects
15:30-16:00		Break - Inside old COMET Classroom (Now MMM Classroom @ FL2-1024)
16:00-17:30		Projects
	17:30	Bus return
Wednesday, 14 August		NCAR Foothills Lab, Building 2 (FL2)
	8:00	Bus pickup - Millennium Hotel
08:30-09:30		Bas van Ruijven - Integrated assessment modeling
09:30-10:30		Joeri Rogelj - Carbon-climate uncertainty and policy implications
10:30-11:00		Break - Inside old COMET Classroom (Now MMM Classroom @ FL2-1024)
11:00-12:30		Projects
12:30-13:30		Lunch - On your own (FL2 Cafeteria)

13:30-15:30	Projects
15:30-16:00	Break - Inside old COMET Classroom (Now MMM Classroom @ FL2-1024)
16:00-17:30	Projects
17:30	Bus return

Thursday, 15 August	NCAR Foothills Lab, Building 2 (FL2)
8:00	Bus pickup - Millennium Hotel
08:30-09:30	Diane McKnight - Freshwater to coastal systems
09:30-10:30	Hanna Lee - Key biomes: Arctic Ecosystems
10:30-11:00	Break - Inside old COMET Classroom (Now MMM Classroom @ FL2-1024)
11:00-12:30	Projects
12:30-13:30	Lunch - On your own (FL2 Cafeteria)
13:30-15:30	Projects
15:30-16:00	Break - Inside old COMET Classroom (Now MMM Classroom @ FL2-1024)
16:00-17:30	Projects
17:30	Bus return

Friday, 16 August	NCAR Foothills Lab, Building 2 (FL2)
8:00	Bus pickup - Millennium Hotel
08:30-10:00	Final project presentations
10:00-10:30	Break - Inside old COMET Classroom (Now MMM Classroom @ FL2-1024)
10:30-12:00	Final project presentations
12:00	Bus return