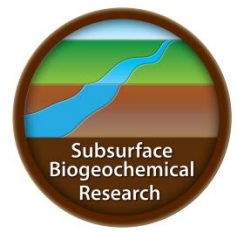




**Environmental System Science
Principal Investigator (PI) Meeting
April 25-26, 2017
Bolger Center, Potomac, MD**



Monday, April 24, 2017

8:00 am - 5:30 am **ESS Working Group Meeting (Franklin Building: Room 17A/B, 18, 19)**

1:00 pm – 6:00 pm **Meeting Check In (Franklin Building)**

Team Meetings (Franklin Building)

7:00 pm NGEE-Tropics (Room 4).....J. Chambers

Tuesday, April 25, 2017

7:00 am - 8:30 am **Breakfast (Franklin Building)**

7:00 am -8:30 am **Meeting Check-In (Franklin Building)**

8:30 am - 9:55 am **Overview of Programs & Updates (Ben Franklin Hall) **R. Hirsch****

8:30 am -8:35 am Welcome and Introductory Comments.....R. Hirsch

8:35 am - 8:45 am BER Programs.....S. Weatherwax

8:45 am - 8:55 am CESD Programs & Strategic Directions.....G. Geernaert

8:55 am - 9:05 am SBR Program Update.....P. Bayer

9:05 am - 9:15 am TES Program UpdateD. Stover

9:15 am - 9:30 am ESS Working Group Update.....D. Lesmes

9:30 am - 9:45 am ESS Data Archive Update.....J. Hnilo

9:45 am - 10:10 am **Break**

10:10 am - 12:15 pm **Plenary Session I – Understanding Microbial Complexity and Functioning in Environmental Systems (Ben Franklin Hall) **D. Lesmes****

10:10 am - 10:35 am The Biogeochemistry of Microbial Communities.....B. Hungate

10:35 am - 11:00 am Microbes, Meta-analysis, Mountains, Models, and Mechanics:
Exploring Ecosystem Function under Global Change.....A. Classen

11:00 am - 11:25 am ENIGMA Project: Lab to Field and Back - Environmental System
Microbiomes.....T. Hazen

11:25 am - 11:50 am Transitioning Genome-Resolved Metagenomic Analysis of Diversity
and Microbial Metabolism from the Aquifer to the Watershed Scale..... J. Banfield

11:50 am - 12:15 pm Microbes to the Environment: Capturing Microbial Complexity and Functioning in Environmental System Models.....T. Scheibe

12:15 pm - 2:00 pm **Lunch (Osgood Building)**

1:00 pm - 2:00 pm Lunch Discussion on FICUS and Research Opportunities with the Scientific User Facilities. (Room 3).....EMSL, JGI and Synchrotron User Facility POCs

2:00 pm - 5:00 pm **Poster Session I (Franklin Building: Rooms 1, 21, 22, and 23)**

2:00 pm - 3:30 pm Poster Subsession A

3:30 pm - 5:00 pm Poster Subsession B

5:30 pm - 7:00 pm **Dinner (Osgood Building)**

7:00 pm - 8:30 pm **Concurrent Sessions - I (Franklin Building)**

Concurrent Session 1: SBR Team Meeting/Town Hall (Room: Ben Franklin Hall) **D. Lesmes/P. Bayer**

Concurrent Session 2: TES Breakout: Terrestrial-Soils and Biogeochemical Interactions Ignite Session (Room 18/19) **K. Todd Brown and V. Salmon**

7:00 pm - 8:30 pm Ignite Session Introduction and Discussion

1. A Dispatch from the Dry Side:Data-Model Dialogues from Seasonally Dry Tropical Forest.....J. Powers
2. Resolving Conflicting Physical and Biochemical Feedbacks to Climate in Response to Long-Term Warming.....K. DeAngelis
3. Knowledge-Model Integration: The Importance of Ecological Insight in Earth system models.....W. Wieder
4. How Soil Depth Affects Decomposition.....C. Hicks-Pries
5. Processes Governing the Spatial Heterogeneity of Soil Carbon Stocks.....U. Mishra
6. Pore- to Core-Scale Research to Inform Ecosystem-Scale Soil C Biogeochemistry: Drought and Wetting Events Alter Soil Carbon Dynamics.....V. Bailey
7. Rapid Changes in the Permafrost Soil Carbon Pool in Response to Warming.....T. Schuur
8. Otherwise Decomposable Substrates Exhibit Apparent Recalcitrance When Sorbed to Minerals: A Study of Glucose and Organo-Mineral Complexes in Soil.....R. Porras
9. Decoding the Secrets of Carbon Preservation in Low-latitude Peatlands.....C. Richardson
10. Modeling Soil Organic Carbon Transformations in Anoxic Arctic soil microcosm.....J. Zheng
11. Discussion

Concurrent Session 3: TES Breakout: Biogeochemistry at the Terrestrial-Aquatic Interface (Room 17A/B)

N. Griffith and G. Noyce

- 7:00 pm - 7:15 pm From Roots to Rivers: Tracking the Fate of Dissolved Organic Matter Through Arctic Tundra Soils.....L. Lynch
- 7:15 pm - 7:30 pm Macrotopographic and Microtopographic Controls on Surface Water and Active Layer Chemistry in the Arctic Coastal Plain of Northern Alaska.....J. Heikoop
- 7:30 am - 7:45 pm Molecular Changes in Dissolved Organic Matter with Increasing Humification at the Spruce and Peatlands Response Under Climate and Environmental Change Site.....R. Wilson
- 7:45 pm - 8:00 pm Confronting Earth System Models with Observations in the SPRUCE Peatland: Challenges and Opportunities.....D. Ricciuto
- 8:00 pm - 8:15 pm Carbon Dynamics Across the Terrestrial-Aquatic Landscape of Subtropical Florida.....R. Hinkle
- 8:15 pm - 8:30 pm Hot Spots and Hot Moments: Investigating the Relationship Between Soil Redox Dynamics and Greenhouse Gas Fluxes Along a Catena Gradient in a Wet Tropical Forest.....C. O'Connell

Concurrent Session 4: TES Breakout: Terrestrial-Atmosphere Interface (Room 15/16)

E. Campbell and S. Dengel

- 7:00 pm - 7:20 pm Best Practices and Pitfalls when Managing, Sharing, and Archiving ESS Data Research.....T. Killeffer and D. Christianson
- 7:20 pm - 7:40 pm Using Stable Carbon Isotopes of CO₂ to Better Characterize Poorly Represented Terrestrial Ecosystem Processes.....B. Raczka
- 7:40 am - 8:00 pm Is Carbonyl Sulfide a Tracer of Both Stomatal Conductance and Gross Primary Production?.....E. Campbell
- 8:00 pm - 8:30 pm Discussion

Wednesday, April 26, 2017

7:00 am - 8:00 am **Breakfast (Franklin Building)**

7:30 am – 8:30 am **Breakfast with the User Facilities** (Learn about capabilities and updates from each of the Scientific User Facilities & Community Resources Facilities – ARM, EMSL, JGI, ESSDA, Synchrotrons) Open discussion at tables in the cafeteria.....Osgood Building

8:30 am – 12:00 pm **Concurrent Sessions – IIA: SBR Town Hall Breakouts**

Concurrent Session 5: SBR Town Hall Breakout - Topic: Watershed Systems (Room 4)

D. Lesmes

Concurrent Session 6: SBR Town Hall Breakout - Topic: Hydro-Biogeochemistry (Room 17A/B)

P. Bayer

9:00 am – 12:00 pm **Concurrent Sessions – IIB: TES Town Hall and Updates**

Concurrent Session 7: TES Town Hall and updates (Room: Ben Franklin Hall)

D. Stover

12:00 pm - 1:30pm **Lunch (Osgood Building)**

12:30 pm – 1:30 pm Sage Advice for Students and Post-Docs (Room 4).....D. Stover

1:30 pm - 4:30 pm **Poster Session II (Franklin Building: Rooms 1, 21, 22, and 23)**

1:30 pm - 3:00 pm Poster Subsession C

3:00 pm - 4:30 pm Poster Subsession D

4:30 pm - 4:40 pm **Break**

4:40 pm - 5:20 pm **Plenary Session III – Community Updates (Ben Franklin Hall)**

D. Stover

4:40 pm - 4:55 pm Outbrief of the Research Priorities to Incorporate Terrestrial-Aquatic Interfaces in Earth System Models Workshop.....P. Megonigal

4:55 pm - 5:20 pm Outbrief of the SBR Town Hall and Associated Breakouts.....D. Lesmes

5:20 pm - 5:30 pm **Closeout/Announcements**

5:30 pm - 7:00 pm **Dinner (Osgood Building)**

7:00 pm **Adjourn**