



**Environmental System Science
Principal Investigator (PI) Meeting
August 17-19, 2021
Virtual Meeting**



All Times Eastern Time Zone

Tuesday, August 17, 2021 – Start of ESS PI Meeting

Block I – Opening Plenary Webinar

11 am – 12p **Overview of Programs & Updates**
Moderator: B. Benscoter

- 11:00 Opening Logistics & Introductory Comments.....B. Benscoter
- 11:10 Welcome & BER Programs.....S. Weatherwax
- 11:20 EESSD Programs.....G. Geernaert
- 11:30 ESS Program Introduction & Update J. Arrigo

12:00 pm – 1:30 pm **Plenary Session I – Building Research Partnerships: Insights and Opportunities**
Moderator: D. Stover

- 12:00 NGEE-Arctic..... S. Wullschleger
- 12:10 NGEE-Tropics.....J. Chambers
- 12:20 SPRUCE..... P. Hanson
- 12:30 Watershed Function.....S. Hubbard
- 12:40 COMPASS-FME.....V. Bailey
- 12:50 Diversity, Inclusion, & Research Integrity.....J. Carruthers
- 1:00 Q&A

1:30 pm - 2:00 pm **Break**

Block II – Concurrent Breakout Meetings

2:00 pm - 3:30 pm **Concurrent Sessions - I**

Session A: Resolving and representing the physical, chemical, and biological processes that occur across Terrestrial-Aquatic Interfaces

Organizers: V. Bailey, M. Weintraub

Session B: What does “cyberinfrastructure” mean and how can it enable your science?

Organizers: C. Varadharajan, D. Moulton, F. Hoffman

3:30 pm – 3:45pm **Break**

3:45 pm - 5:15 pm **Concurrent Sessions - II**

Session A: Long-term press events and short-term pulse events as agents of global change: What do experimental manipulations and models tell us?

Organizers: C. Iversen, M. Mayes, A. Walker, J. Warren, J. Mao, B. Sulman, D. Ricciuto

Session B: Emerging technologies for investigation of soil-plant-microbe dynamics

Organizers: Y. Wu, M. Keiluweit, C. Schadt

5:15 pm **General Assembly: Day 1 Close-out**

(optional)

5:15 pm – 6:00 pm Informal networking event

Wednesday, August 18, 2021

Block III – Plenary Webinar

11:00 am – 11:10 am **General Assembly: Day 2 Announcements**

11:10 am – 12:00 pm **Plenary Session II**

Moderator: P. Bayer

Topic A: ESS Interface with Urban Systems

11:10 Urban watersheds: Fast, dynamic, and “weird” systemsJ. Moore

11:30 Carbon cycling at the edge: How urban forest edges are distinct from interior forestsM. Mayes/J. Warren

11:40 Challenges and potential solutions for urban flux studiesJ. Chen

11:50 Q&A

Topic B: ESS Community Updates

12:00 ESS-DIVES. Cholia

12:10 Accelerating discovery in ESS through ICON scienceJ. Stegen

12:20 EMSL – Partnering to Connect Molecular Understanding to Ecosystem InsightD. Mans

12:30 EXCHANGEN. Ward

12:40 Q&A

1:00 pm – 2:00 pm **Break**

Block IV – Poster Sessions (ordered alphabetically; see website for links to poster files and Slack channels)

2:00 pm – 4:00 pm **Poster Group I** (A through Mayes)

4:00 pm – 6:00 pm **Poster Group II** (McFarlane through Z)

Thursday, August 19, 2021

Block V - Concurrent Breakout Meetings

11:00 am – 12:30 pm **Concurrent Sessions - III**

Session A: Biogeochemical function and ecosystem implications of redox heterogeneities in soils
Organizers: K. Boye, V. Noël, J. Bargar

Session B: Scaling and ModEx: Successes, failures, challenges and opportunities
Organizers: X. Chen, J. Rowland, F. Hoffman, J. Kumar

Session C: From leaf to landscape: measuring and modeling canopy fluxes across multiple scales
Organizers: A. Rogers, M. Cavaleri

Session D: Prediction of river corridor watershed biogeochemistry across scales
Organizers: D. Dwivedi, D. Chadwick, M. Zavarin, J. Stegen

12:30 pm – 12:45 pm **Break**

12:45 pm – 2:15 pm **Concurrent Sessions - IV**

Session A: Soil moisture feedbacks with ecosystem processes
Organizers: D. Cusack, K. McFarlane, M. Mayes

Session B: Developing a culture of safety and trust in team science
Organizers: C. Iversen, S. Wullschlegler

Session C: Light reactions of photosynthesis for carbon cycle modeling
Organizers: L. Gu, P. Hanson

Session D: In Memory of John Zachara: Transformational advances in hydro-biogeochemistry
Organizers: T. Scheibe, X. Chen, E. Roden

2:15 pm – 3:00pm **Break**

Block VI – Closing Plenary Webinar

3:00 pm – 3:10 pm **Introduction and Announcements**

3:10 pm – 4:30 pm **Plenary Session III**
Moderator: J. Arrigo

- 3:10 Updates from USGCRPM. Kuperberg
- 3:22 ExaShedsC. Steefel/ S. Painter
- 3:34 Artificial Intelligence for Earth System Predictability: Synthesis and findings from
white papersH. Wainwright/ F. Hoffman
- 3:46 Lightsource & eBERlight opportunities for ESS researchK. Kemner
- 3:58 Q&A

4:30 pm - 5:00 pm **Closing Remarks** D. Stover

5:00pm Adjourn

(optional)

5:00 pm – 6:00 pm Informal networking event