

Sunday, January 7, 4:00 to 8:00

Icebreaker and name tag pick-up. Light food and drinks.

La Ventana al Mar. This is a small park in the Condado area on the San Juan waterfront, just east of the Vanderbilt Hotel, with access to the ocean. We will set up near Ben and Jerry's Ice Cream, Address 1049 Ashford Avenue, San Juan. Many restaurants nearby.

Monday, January 8

The meeting will take place in the Domingo Marrero Navarro (DMN) building on the campus of the University of Puerto Rico. The address is 12 Ave. Universidad, Ste. 1201, San Juan, PR 00925-2532. If you are driving, we have permission to park in nearby lot N2.

7:30. Auditorium Building opens. Name Tag pick up. Light breakfast and coffee /tea provided.

8:30. Auditorium 3. Welcoming remarks

8:45. Plenary 1 -- Nancy Dise (Center for Ecology and Hydrology, UK), Melanie Vile (West Chester University), and Martin Novák (Czech Geological Survey) - From Acid Rain to the Anthropocene: 37 years of BIOGEOMON.

9:30. Plenary 2 -- Ariel E. Lugo (International Institute of Tropical Forestry)- The biogeochemical history of Puerto Rico in five acts.

10:15. BREAK

10:45. Plenary 3 -- Whendee Silver (University of California, Berkeley)- Playing with chutes and ladders: the slippery slope of redox in terrestrial biogeochemistry.

11:30. Plenary 4 -- Becca Barnes (NSF/AAAS/Belmont Forum) - Rethinking the scientific enterprise: How to make the biogeosciences more welcoming and just.

12:15-13:45 Lunch and posters

13:45-17:15 Sessions 1 and 3

Session 1. Tropical biogeochemistry. Auditorium 3

Conveners: Bill McDowell, University of New Hampshire; Tana Wood, International Institute of Tropical Forestry

13:45	Rebecca Barnes	Belmont Forum	The Amazon and Tropical Forests: Its Global Implications and Needed Urgent Actions
14:00	Amanda Albright Olsen	University of Maine	Chemical weathering of ultramafic rocks at the Rio Cupeyes NEON site in southwestern Puerto Rico
14:15	Emma Aronson	University of California, Riverside	Geomicrobiology trends with depth across varied sites: Initial results from the CZNet GeoMicro Project

14:30	Tanner Beckstrom	University of Hawaii, Manoa	From volcanic ash to abundant earth: Understanding Andisol soil health and organic matter dynamics across an environmental gradient on Hawaii Island
14:45	William McDowell	University of New Hampshire	Effects of hydrologic connectivity on greenhouse gas evasion from small tropical rivers
15:00	Jamie Shanley	U.S. Geological Survey	Attributing changes in streamflow response to transpiration and canopy interception changes after defoliation from 2017 Hurricane Maria in Puerto Rico
15:15	BREAK		
15:45	Kaido Soosaar	University of Tartu, Estonia	Assessing Methane and Nitrous Oxide Fluxes in Soil and Stems of Malaysian Tropical Peat Swamp Forests
16:00	Kuno Kasak (presenter: Kaido Soosaar)	University of Tartu, Estonia	Assessing Carbon Emissions from Drainage Ditches in Oil Palm Plantations on Peat Soil: A Case Study in Borneo, Malaysia
16:15	Gerhard Gebauer	University of Bayreuth, Germany	Partial mycoheterotrophy in the understory of a tropical forest in Panama: A multi-element stable isotope natural abundance approach
16:30	Daniela Cusack	Colorado State University	Seasonal and Experimental Drying Effects on Soil Carbon and Nutrient Cycling across Four Distinct Panamanian Forests

Session 3. Soil carbon stabilization and C sequestration. Auditorium 2

Conveners: Caitlin Hicks Pries, Dartmouth College; Sebastian Dötterl, ETH Zürich

13:45	Debjani Sihi	Emory University	Modeling temperature sensitivity of soil carbon loss from a lowland tropical forest
14:00	Jan Frouz	Czech Academy of Sciences, Biology Centre	Broadleaf and conifers and their interaction with soil biota play contrasting role in soil C sequestration at various stages of pedogenesis
14:15	Luboš Borůvka	Czech University of Life Sciences, Prague	Principal drivers of organic carbon stocks in forest soils of the Czech Republic

14:30	Justin Richardson	University of Virginia	Does climate or tree roots control C and nutrient sequestration in temperate forests? A soil translocation approach
14:45	Liisa Ukonmaanaho	Natural Resources Institute, Finland	Mitigation and adaptation of carbon sequestration in multi objective forest management through co-creation with stakeholders (CARBONPATH)
15:00	Jennifer Holm	Lawrence Berkeley National Laboratory	Coupled biogeochemistry modeling in the ELM-FATES modeling for understanding tropical forest regrowth dynamic
15:15	BREAK		
15:45	Daniel Liptzin	Soil Health Institute	The role of soil health practices on soil organic carbon in managed systems
16:00	Christine Goodale	Cornell University	Soil carbon stock surprises over three decades after liming
16:15	Sophie von Froom (invited – 25 mins)	Dartmouth College	Understanding soil organic carbon abundance and persistence at continental to global scales
16:40	Poster lightning talks		
16:55	Posters		
19:00	Dinner on your own.		

Tuesday, January 9

7:30. Auditorium Building opens. Name Tag pick up. Light breakfast and coffee /tea provided.

8:30. Auditorium 3. Welcoming remarks

8:45. Plenary 5 -- Irena Creed (University of Toronto) - Changes in catchment dissolved organic matter export fuel unforeseen freshwater cyanobacterial blooms in the Anthropocene

9:30 – 12:00. Sessions 2, 10, and 6.

Session 2. Aquatic Carbon Cycling in the Anthropocene: from Molecules to Meta-Analyses. Auditorium 3

Conveners: Kim Wickland, U.S. Geological Survey; Kevin Ryan, U.S. Geological Survey; Jakub Hruška, Czech Geological Survey

9:30	Kelly Aho (invited, 20 mins)	Michigan State University	Building a process-based understanding of discharge-driven variability in CO ₂ and CH ₄ emissions
9:50	David Fazio	U.S. Geological Survey	Methane Dynamics in the Illinois Waterway from Lake Michigan to the Confluence of the Mississippi River: Contrasting Seasonal Patterns of Methane in Urban and Agricultural Environments
10:05	Rachel Pilla	Oak Ridge National Laboratory	Contributions of hydropower reservoirs to global carbon emissions: breaking down sources of uncertainties
10:20	Rachel Gabor	Ohio State University	Seasonal Drivers of the Carbon Budget in the Western Basin of Lake Erie
10:35	BREAK		
11:00	Katie Gaffney	Ohio State University	Spatial and Seasonal Variability of Dissolved Organic Matter and Nitrogen in Lake Erie Tributaries
11:15	Carsten Meyer-Jacob	Université du Québec, Abitibi-Témiscamingue	Impacts of acid deposition and lake browning on organic carbon storage in Canadian northern forest lakes
11:30	Jakub Hruška	Czech Geological Survey	The Increase in Streamwater DOC Concentrations may not Necessarily Imply the Increase of DOC Fluxes, an Example from Central European Catchments.
11:45	Pavel Krám	Czech Geological Survey	Long-term patterns of DOC concentrations in soil water at catchments with contrasting acid-base chemistry

Session 10. Plant-microbe interactions as drivers of ecosystem processes. Auditorium 2

Conveners: Eddie Brzostek, West Virginia University; Christy Goodale, Cornell University; Meghan Midgley, Morton Arboretum

9:30 Nanette Raczka (invited) Nanyang Technological University, Singapore Nutrient acquisition strategies and fine root dynamics determine differences in soil carbon between intact and disturbed tropical peat swamp forests

9:45 Edward Brzostek West Virginia University Unlocking plant-microbial interactions in deep soils: Linking depth gradients in roots, microbial activity, and soil carbon.

10:00 Iwona Jasser University of Warsaw, Poland Composition and molecular structure of microorganisms in biological soil crusts from a dry, high-altitude glacier foreland in the eastern Pamir (Tajikistan)

10:15 Caitlin Pries Dartmouth College Mycorrhizal associations mediate rhizodeposition but not soil C storage in response to nitrogen availability

10:30 BREAK

11:00 Reti Ranniku University of Tartu, Estonia Stem CH₄ and N₂O fluxes from Downy Birch during the spring sap-run period and dependence on dissolved gas concentrations in xylem sap

11:15 Ember Morrissey West Virginia University Ruckus in the rhizosphere: connecting exudation, microbial growth, and carbon cycling in forest soils

11:30 Filip Oulehle Czech Geological Survey Ecosystem δ¹⁵N signature consistently integrates dissolved and gaseous N losses with microbial potential for nitrification and denitrification

11:45 Jennifer Kane West Virginia University Bioenergy crop *Miscanthus x giganteus* acts as an ecosystem engineer to increase bacterial diversity and soil organic matter on marginal land

Session 6. Metal and biogeochemical cycling on geological and historical timescales –

Paleoreconstructions. Auditorium 5

Conveners: Tomáš Navrátil, Czech Academy of Sciences; François Chabaux, University of Strasbourg

9:30 Justin Richardson University of Virginia Importance of inherited Fe oxides on toxic (As, Cd, Pb) and potentially toxic metals (Cu, Ni, Zn) from grey shale-derived soils on geologic timescales

9:45 Joshua Landis Dartmouth College Unraveling processes of atmospheric Hg sequestration by soils over annual to centennial timescales

10:00 Tomáš Navrátil (presenter Filip Oulehle) Czech Academy of Sciences Mercury cycling during acid rain recovery at the 14 forested catchments of the GEOMON monitoring network, Czech Republic

10:15 No talk

10:30 BREAK

11:00 Dawn Cardace University of Rhode Island Elemental Cycling Recorded in Fracture Zone Minerals in Metal Rich Bedrock

11:15 Petr Porcal Czech Academy of Sciences Solar radiation as the likely cause of acid-soluble rare-earth elements in sediments of fresh water humic lakes

11:30 No talk

11:45 No talk

12:00 -13:30 LUNCH and Posters

12:00 -13:30 **Lunchtime workshop: Decolonizing Biogeochemistry.** *Justin Richardson*, University of Virginia; *Pedro Matos Llavona*, University of Massachusetts; *Bryan Rodríguez Colón*, The University of Kansas [leaders]

13:30-15:00 Sessions 2 (continued), 4, and 9

Session 2 (continued). Aquatic Carbon Cycling in the Anthropocene: from Molecules to Meta-Analyses.

Auditorium 3

Conveners: Kim Wickland, U.S. Geological Survey; Kevin Ryan, U.S. Geological Survey; Jakub Hruška, Czech Geological Survey

13:30 Vanessa Garayburu-Caruso Pacific Northwest National Laboratory Drying and rewetting of riverbed sediment shifts DOM thermodynamics and influences sediment respiration rates

13:45 Katherine Wardinski Virginia Tech Dissolved organic matter release at the soil-water interface in isolated wetlands

14:00 Kimberly Wickland U.S. Geological Survey Dissolved organic matter dynamics in the Upper Mississippi River Basin

14:15 Anna Bergstrom Boise State University The changing climate and landscape mosaic means more but less labile organic carbon exports from glacierized watersheds

14:30 No talk

14:45 No talk

Session 4. Change in the Anthropocene: Nutrient cycling -- Eutrophication to Oligotrophication

Auditorium 2.

Conveners: Liisa Ukonmaanaho, Natural Resources Institute Finland; Filip Oulehle, Czech Geological Survey; Emily Elliott, University of Pittsburgh

13:30	Marjo Palviainen (invited)	University of Helsinki	Catchment scale nutrient balance as a tool in precision forestry
13:45	Bernhard Mayer	University of Calgary	Occurrence, sources and fate of nitrate in groundwater of agricultural watersheds in southern Alberta, Canada
14:00	Bianca Rodriguez-Cardona	Université du Québec, Montréal	Nutrient and organic carbon dynamics of a boreal hydroelectric reservoir complex over the initial years after flooding

14:15	David Frey	Cornell University	Disentangling nitrogen's role as a limiting nutrient and acidifier: how does nitrogen availability affect soil respiration?
14:30	Tomas Chuman	Czech Geological Survey	The bedrock and dominant tree species control the forest response to nitrogen deposition
14:45	Michael Mirtl	Environmental Research Centre UFZ, Germany	Putting a Whole System Approach for ecosystem, critical zone and socio-ecological research into practice at the European scale: From triggering long-term N impact studies to interoperable standards and sustainable eLTER research services.

Session 9. Solute and sediment generation across watersheds and scales. Auditorium 5.

Conveners: Diana Karwan, University of Minnesota; Jonathan Duncan, Penn State University

13:30	Sydney Shelton	U.S. Environmental Protection Agency	Chemical Cocktails from Coast to Coast: Is there a Universal Water Quality Signature of Urbanization in Streams?
13:45	Stefanie Whitmire	Clemson University	Microplastic distribution in Puerto Rico streams
14:00	Stephen Hughes	University of Puerto Rico	Sedimentation from widespread mass wasting events in Puerto Rico
14:15	Martin Novák	Czech Geological Survey	Calcium, magnesium and strontium isotope dynamics in Central European headwater catchments along lithological and pollution gradients: Atmospheric vs. geogenic sources for runoff
14:30	Jan Frouz	Czech Academy of Sciences	Using FALCON an array of artificial catchments to study the role of surface heterogeneity on erosion and other ecosystem processes in early stages of ecosystem development
14:45	Jack Brookshire	Montana State University	Scaling of stream organic matter stoichiometry across forest biomes

15:00 BREAK

15:30 Plenary 6-- Eve-Lyn Hinckley (University of Colorado, Boulder) - Our changing manipulation of the global sulfur cycle

16:15 Plenary 7 -- Amy Burgin (University of Kansas) - The Biogeochemical Redox Paradox: How do we make a foundational concept more predictive of biogeochemical state changes?

17:00 -18:00. Posters

18:00 - 21:00. Banquet – on site. Entertainment by Puerto Rican Bomba band, BuleMarayCua’.

Wednesday, January 10

8:00. Light breakfast and coffee /tea provided.

8:45. Field trip overview (outside).

9:00. Depart UPR conference site for field trip to El Yunque National Forest and Luquillo Research sites.

10:00 – 1:00. Three groups cycle among Sabana warming experiment, Bisley experimental watersheds, and Angelitos Trail to Rio Mameyes. Box lunch provided.

1:00 – 3:30. Travel to high-elevation cloud/dwarf forest, meteorological measurement sites. Tour 1-2 National Forest scenic attractions as time permits.

5:00. Arrive back at UPR

Dinner on your own.

Thursday, January 11

7:30. Auditorium Building opens. Light breakfast and coffee /tea provided.

8:30. Auditorium 3. Welcoming remarks.

8:45. Plenary 8 -- Sara Vicca (University of Antwerp -- remote) - Enhancing silicate weathering to promote soil carbon sequestration.

9:30. Plenary 9 -- Kevin Bishop (Swedish University of Agricultural Sciences)- Unraveling the fate of mercury in peatlands with the help of micrometeorology, isotopes, paleoecology, genomics, an ice-age and of course some duct tape.

10:15. BREAK

10:45 – 14:45. Sessions 5 and 8.

Session 5. Wetland hydrology and biogeochemistry. Auditorium 3. Conveners: Melanie Vile, West Chester University; Ülo Mander, University of Tartu, Estonia

10:45 Nancy Dise Centre for Ecology and Hydrology, UK Effects of experimental warming and drought on gaseous carbon fluxes and the carbon balance of a Welsh raised bog

11:00 Sandeep Thayamkottu (presenter: Ülo Mander) University of Tartu, Estonia Carbon sink strength in an Arctic rich fen is driven by primary production and leaf area.

- 11:15 Annamari Laurén University of Helsinki Water and nutrient management in peatland forests under changing climate
- 11:30 Ülo Mander University of Tartu, Estonia Drainage and Drought Increase Greenhouse Gas Fluxes in Global Peatlands
- 11:45 Natalie Griffiths Oak Ridge National Laboratory Warming alters solute concentrations and fluxes from peatland streams
- 12:00 Jessica Tipton (presenter: Stefanie Whitmire) Clemson University Assessing the Impacts of Sargassum Brown Tide to Nearshore Water Quality and Seagrass Beds in Jobos Bay, Puerto Rico

12:15 LUNCH and Posters

- 13:45 Mikk Espenberg University of Tartu, Estonia Microbial community dynamics and N₂O-related genes responses to short-term flooding in riparian forest soil
- 14:00 Mohit Masta (presenter: Mikk Espenberg) University of Tartu, Estonia Using 15N isotope analysis to understand N₂O production and consumption processes.
- 14:15 John White Louisiana State University Changes in Biogeochemical Cycling of N in a Wetland-Dominated Coastal Basin with River Reconnection
- 14:30 Malgorzata Suska Malawska University of Warsaw, Poland Understanding the function of macrophytes in nitrogen and phosphorous management in small water bodies

Session 8. Biogeochemical response to extreme events. Auditorium 2. Conveners: Sujay Kaushal, University of Maryland; Yuehan Lu, University of Alabama; Paul Mayer, Environmental Protection Agency; Martin Novák, Czech Geological Survey

- 10:45 Susana Bernal CEAB-CSIC, Spain Living on the edge: Mediterranean streams as natural laboratories for understanding the impact of extreme hydrological events on biogeochemical transport and cycling.
- 11:00 YueHan Lu University of Alabama Wildfires Linked to Oceanic Anoxic Events in Geological History
- 11:15 Carla López Lloreda Virginia Tech Disturbances drive stream greenhouse gas changes and increased heterogeneity at the reach-scale
- 11:30 Jiří Kopáček Czech Academy of Sciences Increasing frequency of heavy rains accelerates recovery of the Tatra Mountain lakes from acidification
- 11:45 Sujay Kaushal University of Maryland Extreme Events Alter the Future of Freshwater Salinization Syndrome
- 12:00 Steve Norton University of Maine Adsorption to Al-, Fe-, and Mn-oxyhydroxides dominates rare earth element (REE) and P mobility in a headwater stream in Vermont, USA

12:15 LUNCH and Posters

13:45 Jonathan Halama U.S. Environmental Protection Agency Scenarios assessing the effects of land-use change, forest management, and climate change on Puget Sound hydrologic regimes and freshwater habitat quality.

14:00 Meghan Midgley The Morton Arboretum Recovery of plant communities and soil biogeochemistry following high-intensity fire

14:15 Urmila Mallick Yale University The importance of disturbance: hurricanes modify the biotic and abiotic drivers of herbaceous understory plant dynamics in a tropical rain forest

14:30 Paul Mayer U.S. Environmental Protection Agency Centuries-old land-use changes influence contemporary biogeochemical groundwater behavior in headwater streams

14:45 – 15:30. Closing ceremony and wrap-up.

BIOGEMON 11 posters

In hall and alcoves near Auditoriums 2 and 3 – displayed for entire meeting

1. Tropical biogeochemistry

Conveners: Bill McDowell, University of New Hampshire; Tana Wood, International Institute of Tropical Forestry

S1.P1	Bez Warren	University of Maine	Temporal and Spatial Precipitation Chemistry of Puerto Rico and US Virgin Islands
S1.P2	Thomas Korstanje	University of Maine	Temporal Chemical Weathering in the Río Yahuecas Watershed
S1.P3	Marcela Canon	University of Puerto Rico/Fundacion Alma de Bahia	Nutrient and streamflow fluxes in the Espiritu Santo River, a tropical watershed in the Luquillo Mountains
S1.P4	Kristina Estrada	University of Hawaii, Manoa	How disturbing: The effects of anthropogenic disturbance on soil health, productivity, and plant community makeup in tropical and subtropical systems

2. Aquatic Carbon Cycling in the Anthropocene: from Molecules to Meta-Analyses

Conveners: Kim Wickland, U.S. Geological Survey; Kevin Ryan, U.S. Geological Survey; Jakub Hruška, Czech Geological Survey

S2.P1	Megan Greige	Ohio State University	Dissolved Organic Matter Composition in Three Urbanized Streams
S2.P2	Kevin Ryan	U.S. Geological Survey	Drivers of riverine organic matter diversity vary across catchments of the contiguous United States
S2.P3	Paige Kehoe	University of Alaska, Fairbanks	Beavers as Arctic Carbon Cycle Engineers: The Impacts of Beavers on Organic Matter Cycling in Permafrost Landscapes

3. Soil carbon stabilization and C sequestration

Conveners: Caitlin Hicks Pries, Dartmouth College; Sebastian Dötterl, ETH Zürich

S3.P1	Lenka Pavlů	Czech University of Life Sciences, Prague	The effect of agricultural practices on stabilization of organic matter in various soil types.
S3.P2	Murray Sternberg	Emory University	Evaluation of soil carbon dynamics and microbial proxies under different climate-smart agriculture practices
S3.P3	Bůzek František (presented by colleague)	Czech Geological Survey	Tracing carbonaceous emission in an industrial conurbation in Central Europe using 13C data
S3.P4	Joshua Landis	Dartmouth College	Age dating soil organomineral complexation from both sides: a comparison of 14C and fallout radionuclide (FRN) chronometers
S3.P5	Marie Plasova	Czech Geological Survey	The variable sensitivity of soil respiration to temperature is determined by the climatic gradient along the GEOMON catchments.

4. Change in the Anthropocene: Nutrient cycling -- Eutrophication to Oligotrophication

Conveners: Liisa Ukonmaanaho, Natural Resources Institute *Finland*; Filip Oulehle, Czech Geological Survey; Emily Elliott, University of Pittsburgh

S4.P1	Nikola Derková	Czech Geological Survey	The mass balance of base cations (Mg, Ca and K) and P at 14 small catchments, Czech Republic
S4.P2	Emily Elliott	University of Pittsburgh	Biogeochemical Implications of Drinking Water Lead Abatement in Legacy Urban Streams

S4.P3	Abby Yancy	University of Pittsburgh	Assessment of change in the Upper Ohio River Basin: impacts of river regulation and climate change on streamflow and nutrient cycling
S4.P4	Lillian Labus	Ohio State University	The Response of Lake Nutrients During Treatment of a Harmful Algal Bloom by Nanobubble Ozone Technology
S4.P5	Markéta Štěpánová (Presenter: Jakub Hruška)	Czech Geological Survey	Contribution of rime to atmospheric sulfur and nitrogen deposition in Central Europe

5. Wetland hydrology and biogeochemistry

Conveners: Melanie Vile, West Chester University; Ülo Mander, University of Tartu, Estonia

S5.P1	Liisa Ukonmaanaho	Natural Resources Institute, Finland	Wetland restoration for the future - ALFAwetlands
S5.P2	Victoria Niedzinski	University of Maine	Modelling the Influence of Subsurface Geology on Northern Peatland Hydrology
S5.P3	Nicholas Corline	Virginia Tech	Wood frog tadpoles (<i>Lithobates sylvaticus</i>) significantly contribute to nutrient cycling and enhance litter breakdown in wetland ecosystems

6. Metal and biogeochemical cycling on geological and historical timescales -- Paleoreconstructions

Conveners: Tomas Navrátil, Czech Academy of Sciences; François Chabaux, University of Strasbourg

S6.P1	Leona Bohdalková	Czech Geological Survey	Recent Pb soil pools and comparison of long-term Pb mass balances in headwater catchments with different pollution loads
S6.P2	Alexandre Andronikov (presented by colleague)	Czech Geological Survey	Elemental and Mg-Cu-Zn isotopic features of bay bolete (<i>Imleria badia</i>) mushrooms collected over the extended period from the contrasting substrates
S6.P3	Daniel Petrás (presented by colleague)	Czech Geological Survey	Episodic carbonate cementation in Eger Graben claystone: insights into metal cycling and biogeochemical dynamics in Early Miocene lake systems

7. Modeling and synthesis for scaling biogeochemical cycling across space and time

Convener: Jamie Shanley, U.S. Geological Survey

S7.P1	Andrew Reeve	University of Maine	Monitoring groundwater levels and simulating groundwater flow near the Ring of Cenotes, northeastern Yucatan, Mexico.
S7.P2	Bůzek František (presented by colleague)	Czech Geological Survey	Greenhouse gases production in open-pit mines
S7.P3	Vanessa Garayburu- Caruso	Pacific Northwest National Laboratory	Revealing basin-scale metabolism drivers via model-experiment integration

8. Biogeochemical response to extreme events

Conveners: Sujay Kaushal, University of Maryland; Yuehan Lu, University of Alabama; Paul Mayer, Environmental Protection Agency; Martin Novák, Czech Geological Survey

S8.P1	Anna Lamacova	Czech Geological Survey	The Climate Change Imprint: Dynamic Shifts in Spring Yields and Water Quality in the Czech Republic
S8.P2	Emily Elliott	University of Pittsburgh	Geochemical fingerprints of flood dynamics from an artificial extreme event on the Allegheny River
S8.P3	Eva Martinková (presented by colleague)	Czech Geological Survey	The origin of atmospheric lead in urban air of three European cities: Lead isotope approach
S8.P4	Martin Novák (Presenter: Jakub Hruška)	Czech Geological Survey	Controls on $^{26}\text{Mg}/^{24}\text{Mg}$, $^{44}\text{Ca}/^{40}\text{Ca}$ and $^{87}\text{Sr}/^{86}\text{Sr}$ isotope variability in two industrially polluted forested catchments in Central Europe: Insights into nutrient imbalances

9. Solute and sediment generation across watersheds and scales

Conveners: Diana Karwan, University of Minnesota; Jonathan Duncan, Penn State University

S9.P1	Jon Duncan	Penn State University	Exploring Multiscale Variation in Concentration-Discharge Patterns
S9.P2	Colin Fuss	SUNY Plattsburgh	Patterns of stream water N and P concentrations during a high-flow event in northern hardwood forested headwater catchments
S9.P3	Mirae Guenther	University of Minnesota	Differences in watershed-level event scale dynamics of stormwater nutrient concentrations with changes in urban forest of Saint Paul, Minnesota, USA
S9.P4	Diana Karwan	University of Minnesota	Multiple Lines of Evidence Elucidate Sediment and Phosphorus Dynamics in Midwestern USA Watershed
S9.P5	Ondřej Drábek	Czech University of Life Sciences, Prague	Potential mobility of Cr from heavily contaminated soil

10. Plant-microbe interactions as drivers of ecosystem processes

Conveners: Eddie Brzostek, West Virginia University; Christy Goodale, Cornell University; Meghan Midgley, Morton Arboretum

S10.P1	Fahad Ali Kazmi (presenter: Úlo Mander)	University of Tartu, Estonia	Microbial nitrogen cycle in sub-tropical peatland cloud forest and wetland ecosystems of Reunion Island
S10.P2	Courtney Mathers	University of Oregon	Investigating mycorrhizal type impacts on coupled C and N cycling at the soil aggregate scale in an experimental reforestation site