



B21C - Coastal Wetland Carbon and Nitrogen Cycles: Recent Advances in Measurements, Modeling, and Syntheses I Oral



Tuesday, 14 December 2021



09:00 - 10:15



Convention Center - Room 231-232

Coastal marshes, mangroves, and seagrass sequester significant amounts of “blue carbon” in soils, sediments, and biomass. They have potential as a negative emissions technology. With the increasing policy focus on climate change mitigation, we need to understand and accurately predict wetland carbon processes. Complex interactions of climate, land use, sea level, nitrogen pollution, and human management regulate the strength of the carbon sink and the greenhouse gas balance (including CO₂, CH₄, and N₂O). Our ability to measure and model vertical and lateral exchanges, as well as the soil and sediment processes, at the land-ocean interface is limited. We aim to bring together researchers from various disciplines to discuss coastal carbon and nitrogen pools and fluxes, and their roles in global biogeochemical cycling and climate change mitigation. We also aim to report advances in eddy flux, lateral flux, field experiments, remote sensing, modeling, and synthesis that support coastal wetland carbon accounting.

Type

Oral

Primary Convener

[Omar I. Abdul-Aziz](#)

West Virginia University

Conveners

[Jianwu Tang](#)

MBL

[Kevin D Kroeger](#)

USGS

[Lisamarie Windham-Myers](#)

USGS - National Research Program

Chairs

[Omar I. Abdul-Aziz](#)

West Virginia University

Jianwu Tang

MBL

Kevin D Kroeger

USGS

OSPA Liaison

Lisamarie Windham-Myers

U.S. Geological Survey

Index Terms

0414 Biogeochemical cycles, processes, and modeling

0428 Carbon cycling

0469 Nitrogen cycling

0497 Wetlands

Ask a question or comment on this session (not intended for technical support questions).

Have a question or comment? Enter it here.

11 Papers

🕒 09:00

Introductory Remarks

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🕒 09:05

B21C-01


Plant Trait Regulation of Methane Emissions from Coastal Wetlands

[Detail Message](#)

Patrick Megonigal

(Invited)

 *Convention Center - Room 231-232*

 09:15


B21C-02

Interactive controls of redox conditions and rhizodeposition on biotic and abiotic processes in mineral salt marsh soils

Amanda C Spivak

(Invited)

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 09:25

B21C-03

Modeling Salinity and Flooding Impacts on Methane Production across Submerging Deltaic Wetlands

Jiaze Wang

 *Convention Center - Room 231-232*


 09:30

B21C-04

A Synthesis of Tidal Wetland Methane Emissions Across the Contiguous United States

Ariane Arias Ortiz

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 09:35

B21C-05

Estimating Aboveground Biomass and Carbon in Salt Marshes across the Contiguous United States

Anthony Campbell

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 09:40

B21C-06

How will increases in temperature and nutrient loading impact greenhouse gas fluxes and nitrogen processing in salt marsh soils across a climatic gradient?

Sophie Comer-Warner

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 09:45

B21C-07

Assessing the Current and Future Potential Carbon Sink of Louisiana's Coastal Habitats

Melissa Millman Baustian

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 09:50


 09:30

B21C-08

Carbon stock spatial distribution estimate and influential factors of mangrove forests

Yuchen Meng

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 09:55

B21C-09

Increased landscape connectivity enhances coastal carbon sink under heightened rates of SLR

Kendall Valentine

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 10:00

Discussion

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Category: Biogeochemistry (terrestrial and marine)

Section: Biogeosciences

Neighborhoods: 3. Earth Covering

Type: Oral

Cross-Listed: H - Hydrology

Cross-Listed: GH - GeoHealth

Cross-Listed: GC - Global Environmental Change

Cross-Listed: A - Atmospheric Sciences



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