

John Gardner

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[Scholar](#) | [Website](#)

APPOINTMENTS

- 2021 Assistant Professor. Department of Geology and Environmental Science. University of Pittsburgh
- 2018-2020 NSF Earth Sciences Postdoctoral Fellow. Geological Sciences Department. University of North Carolina-Chapel Hill.

EDUCATION

- 2018 Duke University
Ph.D. Environmental Science. Advisor: Dr. Martin Doyle
- 2014 University of Maryland-Horn Point Laboratory
M.S. Marine, Estuarine, and Environmental Science
Advisors: Dr. Thomas Fisher and Dr. Thomas Jordan
- 2010 University of Missouri
B.S. Soil, Environmental, and Atmospheric Science
B.A. Geography
Minor in Biology

PUBLICATIONS (**student, postdoc, or staff in Gardner Lab Group; *student mentee outside of lab group)

Prum P**, Harris L, **Gardner J**. Widespread warming of Earth's estuaries. Accepted in *L&O Letters*.

Narayanan A*, **Gardner J**, Cohen S. Sediment response to deforestation in the Amazon River basin. Accepted in *Earth Surface Dynamics*.

Gardner J, Doyle M, Ensign S, Kahler D. A new metric for light exposure in rivers, lakes, and oceans. (2023). *Limnology and Oceanography Letters*. 10.1002/lol2.10365

Gardner J, Pavelsky T, Yang X, Topp S, Ross M, Cohen S. (2023). Human activities change suspended sediment concentration along river. *Environmental Research Letters*. 18:6. 10.1088/1748-9326/acd8d8.

Moragoda N*, Cohen S, **Gardner J**, Munoz D, Narayanan A*, Moftakhari H, Pavelsky T. (2023). Modeling and Analysis of Sediment Trapping Efficiency of Large Dams using Remote Sensing. *Water Resources Research*. e2022WR033296. 10.1029/2022WR033296.

Yang X, O'Reilly C, **Gardner R**, Ross M, Topp S, Wang J, Pavelsky T. (2022). The color of Earth's lakes. *Geophysical Research Letters*. 49, e2022GL09892. 10.1029/2022GL098925. (covered by > 72 media outlets)

Fox R, Fisher T, Gustafson A, Koontz E, Lepori-Bui M, Kvalnes K, Bunnell-Young D, **Gardner J**, Lewis J, Winsten J, Fisher K. (2021). An evaluation of the untargeted BMP approach to water quality improvements in small agricultural watersheds of the Choptank Basin. *Journal of Environmental Management*. 299, 113478. 10.1016/j.jenvman.2021.113478.

Topp S, Dugan H, Yang X, **Gardner J**, Ross M, Pavelsky T. (2021). Shifting patterns of summer lake color phenology in over 26,000 US lakes. *Water Resources Research*. 57, e2020WR029123. 10.1029/2020WR029123.

Gardner J, Ross M, Topp S, Yang X, Alteneau E, Pavelsky T. (2021). The color of rivers. *Geophysical Research Letters*. 48, e2020GL088946. 10.1029/2020GL088946. (covered by >150 media outlets including Associated Press, The Guardian, Salon, Nature, The Weather Channel, Smithsonian Magazine, Scientific American, NASA Observer)

Gerson J, Topp S, Vega C, **Gardner J**, Yang X, Fernandez L, Bernhardt E, Pavelsky T. Artificial lake expansion amplifies mercury pollution from gold mining. (2020). *Science Advances*. 6:48. 10.1126/sciadv.abd4953. (covered by 9 media outlets such as AAAS EurekAlert and phys.org)

Allen G, Yang X, **Gardner J**, Holliman J, David C, Ross M. (2020). Timing of Landsat overpasses effectively captures river flow conditions of large rivers. *Remote Sensing*. 12:9. 10.3390/rs12091510.

Gardner J, Ensign S, Houser J, Doyle M. Light exposure along particle flowpaths in large rivers. (2020). *Limnology and Oceanography*. 65:1, 128-142. 10.1002/lno.11256.

Gardner J, Doyle M, Pavelsky T. The abundance, size, and spacing of lakes and reservoirs connected to river networks. (2019). *Geophysical Research Letters*. 46:5, 2592-2601. 10.1029/2018GL08084. (Top 10% most downloaded paper in GRL 2019)

Pivato M, Carniello L, **Gardner J**, Silvestri S, Marani M. (2018). Water and sediment temperature dynamics in shallow tidal environments: the role of the heat flux at the sediment-water interface. *Advances in Water Research*. 113, 126–140. 10.1016/j.advwatres.2018.01.009.

Knee K, **Gardner J**, Brenner D, Fox R, Gustafson A, Fisher T, Jordan T. (2018). Measuring diel and spatial variation in biogenic N₂ delivery, production and loss with natural tracers: Application to watershed-scale estimation of denitrification. *Limnology and Oceanography Methods*. 16, 10.1002/lom3.10266.

Gardner J, Doyle M. (2018). Sediment-water surface area along rivers: water column vs. benthic. *Ecosystems*. 21, 1505-1520. 10.1007/s10021-018-0236-2.

Ensign S, Doyle M, **Gardner J**. (2017). New strategies for measuring rates of environmental process in rivers, lakes, and estuaries. *Freshwater Science*. 36:3, 453-465. 10.1086/692998.

Gardner J, Fisher T, Jordan T, Knee K. (2016). Balancing watershed nitrogen budgets: accounting for biogenic gases in streams. *Biogeochemistry*. 127:2, 231-253. 10.1007/s10533-015-0177-1.

PUBLICATIONS- in review or revision (student, staff, or postdoc in Gardner Lab)**

Prajapati R**, **Gardner J**, Pavelsky T. Recovery of suspended sediment downstream of large dams in the US. (In Review in WRR)

Bruns N, **Gardner J**, Doyle M. Flow dependent patchiness in river color. (In Review in JGR)

Ramtel P*, Feng D, **Gardner J**. Quantifying Riverine Phosphorus in the Contiguous United States Using Long-Term Remote Sensing Data and Machine Learning. (In Review)

NON PEER REVIEWED PUBLICATIONS or DATABASES

Gardner J, Doyle M, Patterson L. 2017. Estimating the Value of Public Water Data. Nicholas Institute white paper, 17-05. Duke University

Arora B, Goldstein E, **Gardner J**, Margaret Z, Wainwright H. 2021. Open-source AI-ready data for prediction of coastal water and carbon budgets under a changing climate. US-DOE AI4ESP white paper.

Gardner J, Yang X, Topp S, Ross M, Pavelsky P, Altenau E. (2020). River Surface Reflectance Database (RiverSR) (Version v1.1.0) [Data set]. Zenodo. <http://doi.org/10.5281/zenodo.4304567>

Gardner J, Yang X, Topp S, Ross M, Pavelsky P. (2023). River Sediment Database (RivSed) (v1.1) [Data set]. Zenodo. <https://doi.org/10.5281/zenodo.7938267>

GRANTS

<i>Pending</i>	New Zealand MBIE. Smart Ideas Concept Proposal: <i>Deciphering climatic and human controls on river mobility in Aotearoa New Zealand</i> . Co-PI
2024-2025	NSF Convergence Accelerator: Track K <i>Water Equity. Remote sensing tools to catalyze equitable water outcomes</i> . Co-PI. (Phase 1: \$750,000)
2022-2025	NASA AIST. <i>A hosted analytic collaborative framework for global river water quantity and quality from SWOT, Landsat, and Sentinel-2</i> . Co-PI. (\$2.1 million: \$230,000 to Pitt)
2022-2025	NASA Remote Sensing of Water Quality. <i>Understanding and predicting algal blooms across networks of rivers and reservoirs</i> . Co-PI. (\$610,000: \$300,000 to Pitt)
2022-2024	Hillman Foundation. <i>Assessing harmful algal blooms in the Ohio River: Drinking Water in a Changing Climate</i> . Co-PI. (\$300,000 to Pitt)
2021-2024	NASA New Investigator Program. <i>Resilience of sediment regimes in global rivers: developing an intelligent, global total suspended solids database using satellite remote sensing</i> . PI. (\$396,964 to Pitt)
2021-2022	Pitt Momentum Funds Seed Grant. <i>Coastal rivers: the missing link in source to sink understanding of sediment flux in a changing world</i> . PI. (\$16,900)
2019	Duke University Data+ Undergraduate Research Grant. <i>Visualizing the nation's water quality data</i> . Co-PI. (\$14,000)
2018-2021	NSF Earth Sciences (EAR) Postdoctoral Fellowship. <i>The scaling properties of river-lake networks</i> . PI. (\$174,000)
2016-2017	North Carolina Sea Grant Mini-Grant. <i>Form and function of fluvial-tidal transitions</i> . (\$4,900)
2014-2016	NSF-IGERT Wisenet Graduate Fellowship. Duke University. (\$70,000 + tuition)
2013	Maryland Water Resources Research Center Graduate Fellowship. <i>Stormflow and baseflow nutrient export over a gradient of land use</i> . (\$6,000)

- 2013 Izaak Walton League Graduate Research Grant. *Nutrient export and N₂O emissions from Maryland Coastal Plain streams*. (\$2,500)
- 2008 Life Sciences Undergraduate Research Opportunity Program. *Developing a molecular technique to investigate nitrifying bacteria in forest soils*. (\$5,000)
- 2007 Life Sciences Undergraduate Research Opportunity Program. *Characterizing fungal effector protein repression of innate immune responses*. (\$5,000)

Not Recommended

- 2023 David and Lucille Packard Foundation Fellowship in Science and Engineering. PI.
- 2023 NASA IDS. *Understanding how trends in riverine CDOM can cause changes in coastal hypoxia*. Co-PI.
- 2022 NASA Earth System Science for Building Coastal Resilience. *Understanding marsh persistence in a changing climate with satellites and deep learning*. Co-PI.
- 2022 NASA SERVIR. *Identifying complex system connections and mitigations strategies for hydroclimatic disasters in the Hindu Kush Himalayas*. Co-PI.
- 2021 NASA Science of Terra, Aqua, Suomi NPP, JPSS. *Bridging catchment hydrology and global remote sensing: Role of rain-on-snow events in hydrologic regimes*. PI.
- 2021 NSF-Frontier Research in Earth Science. *Collaborative Research: Linking Landscapes: Unraveling the connection between sediment delivery and coastal marsh persistence with big data and machine learning*. Co-PI.

AWARDS

- 2022 ARIS Impact Award (Center for Advancing Research Impact in Society) to Pittsburgh Water Collaboratory
- 2017 Duke Graduate School Summer Fellowship (\$5,500)
- 2014-2017 Conference Travel Award. Duke University Graduate School
- 2013 Outstanding Student Paper Award. American Geophysical Union
- 2011-2012 Horn Point Laboratory Graduate Fellowship. University of Maryland. (\$25,000 + tuition)
- 2010 Jesse Wheeler Outstanding Geography Undergraduate Award. University of Missouri
- 2009 NSF-Research Experience for Undergraduates (REU). University of Nevada-Reno
- 2009 Chancellors Excellence Award in Leadership. University of Missouri
- 2008-current Phi Beta Kappa Honors Society. University of Missouri
- 2005-2009 Excellence Award Scholarship. University of Missouri (\$2,000/year)

TEACHING

Faculty

- Since 2022 Groundwater Hydrology (GEOL 1051/2151). University of Pittsburgh
- Since 2022 Water in a Changing World (GEOL 2961). University of Pittsburgh
- Since 2021 Surface Water Hydrology (GEOL 1050/2050). University of Pittsburgh

Teaching Assistant

- 2018 Stream Ecology and Restoration (ENV744). Duke University
- 2017 Water Resources, Finance, Planning (ENV621). Duke University
- 2016 Energy Systems Modeling (ENV701). Duke University
- 2013 Land Margins Interactions (MEES600). University of Maryland

MENTORING

Undergraduate students

- 2024-current. Geetika Godavarthy. University of Pittsburgh
- 2023-2024. Robert Murphy. University of Pittsburgh

2022-2024. Brandon Yasin. University of Pittsburgh
2022-2023. Claire Kemick. University of Pittsburgh
2022-2023. Tom Plazek. University of Pittsburgh
2022. Lydia Ciani. University of Pittsburgh
2021. Dylan Gordon. University of Pittsburgh
2021. Aaron Carr. Pittsburgh Water Collaboratory, University of Pittsburgh
2019-2021. Andrew Buchanan. University of North Carolina.
2020. Muhammad Umair Ansari. North Carolina Central University. IDEA summer fellow
2019. Yoav Kargon. Duke University. Data+ summer fellow
2019. Tommy Lin. Duke University. Data+ summer fellow
2016. Virginia Young. University of Wisconsin-Eau Claire field technician.

PhD Students

2022-current. Gabriella Zuccolotto. University of Pittsburgh
2021-current. Punwath Prum. University Pittsburgh
2021-current. Rajaram Prajapati. University of Pittsburgh

Postdoctoral and Staff Researchers

2023-current. Dr. Luisa Lucchese. University of Pittsburgh
2022-current. Sam Sillen. University of Pittsburgh
2021-2023. Dr. Elad Dente. University of Pittsburgh (Now faculty at Haifa University, Israel)

Committee member for graduate students

2023-current. Hailey Sinon. University of Pittsburgh
2022-current. Kate Zidar. University of Pittsburgh
2022-current. Camille Sicker. University of Pittsburgh
2021-current. Tianyue Qu. University of Pittsburgh
2021-current. Jamie Vornlocher. University Pittsburgh
2021-current. Elijah Hall. University Pittsburgh
2021-current. Timothy Suder. University of Pittsburgh
2021-2023. Nishani Moragoda. University of Alabama
2021-2022. Rebecca Tisherman. University Pittsburgh
2021-2022. Rebecca Forgrave. University Pittsburgh
2021-2022. Anuska Narayannan. University of Alabama
2021-2022. Julio Caineta. University of Pittsburgh

SERVICE

Proposal Reviewer/Panelist: NSF-Earth Sciences, NSF panelist, NASA panelist, California Sea Grant, German Research Foundation (Deutsche Forschungsgemeinschaft-DFG), Ad-hoc USGS internal reviewer

Manuscript Reviewer: Nature Communications, Science Advances, Geophysical Research Letters, Limnology & Oceanography, Limnology & Oceanography Letters, Ecology, Journal Geophysical Research-Earth Surface, Journal Geophysical Research-Biogeosciences, Water Resources Research, Estuaries and Coasts, EGU sphere, Remote Sensing, Aquatic Science, Biogeochemistry, WIRES-water, Oecologia, Journal of Hydrology-Regional Studies, IEEE Transactions in Geoscience and Remote Sensing

Convener/Co-convener

2022 American Geophysical Union. *Basin to global scale river processes in the Anthropocene.*
2021 American Geophysical Union. *Grains to satellites: sediment and hydrologic processes across scales.* Conveners: Colin Phillips, Sarah Schanz, Anya Leenman

- 2021 Joint ASLO-SFS meeting. *Beyond lentic or lotic: Integrating the science of inland waters*. Conveners: Megan Fork, Erin Hotchkiss, Stuart Jones, Chris Solomon
- 2017 American Geophysical Union. *Flowpaths, snapshots, and fixed-sites: Advances in alternative approaches in ecosystem science*. Conveners: Luke Loken, Robert Hensley

Outreach and Academic Service

- 2022- Chair. Diversity, Equity, and Inclusion committee. University Pittsburgh Department of Geology and Environmental Science
- 2022- CUAHSI representative for University of Pittsburgh.
- 2021- Associate Director. Pittsburgh Water Collaboratory. University of Pittsburgh
- 2021- Member. Graduate Student Committee. Department of Geology and Environmental Science. University of Pittsburgh
- 2021- Board member. World History Center. University of Pittsburgh
- 2021-2022 Organizer. Department of Geology and Environmental Science Seminar. University of Pittsburgh
- 2021 Panelist. AGU-CUAHSI. Navigating Academic Waters: Academic Job Applications Cyber Workshop. July 8, 2021
- 2020 Organizer. Sediment Dynamics Seminars. University of North Carolina
- 2017 Instructor. Consortium of Universities for the Advancement of Hydrologic Science (CUAHSI) workshop on “Lagrangian and Eulerian in-situ sensors”. Nov 5-9
- 2016-2017 Treasurer. Nicholas School Graduate Student Council. Duke University
- 2015-2016 Coordinator. Nicholas School Seminar Series. Duke University
- 2013 University of Maryland Graduate Student Council
- 2013 Annual MEES Colloquium Planning Committee. University of Maryland
- 2011-2014 Horn Point Lab Environmental Outreach Team. University of Maryland
- 2009-2010 Vice President. Sustain Mizzou 501(c)3 non-profit. Columbia, Missouri

MEDIA COVERAGE

- 2021 One-third of America’s rivers are changing color. [Associated Press](#), [Salon](#), [The Guardian](#), [Nature](#), [The Weather Channel](#), [Smithsonian Magazine](#), [Scientific American](#) and >150 other outlets.
- 2019 [For organisms that go with the flow in rivers, it’s a darker journey than we thought](#). Duke University Nicholas School of the Environment.
- 2016 [HydroSphere Drifter Brings Lagrangian Sampling to Freshwater](#). Environmental Monitor Magazine.
- 2015 [Early Career Insights: How life flows in a river](#). Frontiers Science News.

PROFESSIONAL MEMBERSHIPS

- 2013-present American Geophysical Union
- 2015-present Society of Freshwater Science
- 2018-present Association for the Sciences of Limnology and Oceanography

PRESENTATIONS-*invited*

- 2023 Gardner J. Global change in large rivers. Virginia Tech. Department of Geosciences Seminar. November 10, 2023.
- 2023 Gardner J. Global river science using Earth observations. North Carolina State University. Department of Forestry and Environmental Resources Seminar. October 9, 2023.
- 2022 Gardner J. and Ross M. Remote sensing of freshwaters for discovery and management. Water, Wetlands, and Watersheds seminar series. University of Florida. November 2, 2022.

- 2022 Gardner J. Developing a global riverine SSC database. NASA SWOT River Science Team Meeting. June 23, 2023.
- 2022 Gardner J. River science from space. Duquesne University Department of Environmental Science Seminar Series. February 25, 2022.
- 2021 Gardner J. Using remote sensing and machine learning to build a global database of suspended sediment in rivers. ML for remote sensing working group. July 23, 2021.
- 2021 Gardner J. Human impacts on sediment delivery in rivers. Smartphones For Water-Nepal. May 5, 2021.
- 2021 Gardner J. Human impacts on sediment delivery in US rivers. University of North Carolina Department of Geological Sciences. March 11, 2021.
- 2020 Gardner J. The persistent sediment delivery problem in rivers. University of California Santa Cruz Department of Earth and Planetary Sciences. December 1, 2020.
- 2020 Gardner J, Ross M, Topp S, Yang X, Pavelsky T. The color of rivers. Association for the Sciences of Limnology and Oceanography and Society for Freshwater Science Joint Summer Meeting. Madison, WI. June 6, 2020. (Cancelled due to COVID19).
- 2020 Gardner J. Our expanding view of rivers. University of Pittsburgh. January 31, 2020.
- 2019 Gardner J. Our expanding view of rivers. University of Maryland Center for Environmental Science-Horn Point Laboratory. September 23, 2019.
- 2019 Gardner J. From flowpaths to satellites: Measuring how light, lakes, and sediment change along rivers. Stroud Water Research Center seminar series. May 30, 2019.
- 2019 Gardner J. From flowpaths to satellites: Measuring how light, lakes, and sediment change along rivers. University of Maryland Center for Environmental Science-Horn Point Laboratory seminar series. May 29, 2019.
- 2013 Gardner J. Missing nitrogen in Delmarva streams: the role of denitrification and N₂O emissions. USGS MD-DE Water Science Center Seminar Series. November 13, 2013.

SELECT CONFERENCE PRESENTATIONS (student, staff, or postdoc in Gardner Lab)**

Oral

Prajapati R**, Gardner J, Lakhe H. Quantifying suspended sediment flux in Himalayan rivers using citizen science and low-cost sensors. American Geophysical Union. December 11, 2023. San Francisco.

Ramtel P, Feng D, Gardner J. Enhancing the Understanding of Riverine Phosphorus Dynamics in the Contiguous United States: A Remote Sensing and Machine Learning Approach. American Geophysical Union. December 13, 2023. San Francisco.

Sillen S**, Zuccolotto G**, Gardner J, Collins S. New capabilities in using remote sensing data to predict algal blooms in large rivers and reservoirs. Association for the Sciences of Limnology and Oceanography. June 2023. Mallorca, Spain.

Cohen S, Morogoda N, Gardner J, Pavelsky T, Narayanan A. advances in modeling basin to global scale fluvial sediment and its anthropogenic drivers. American Geophysical Union. December 14, 2022. New Orleans.

Morogoda N, Cohen S, Gardner J, Munoz D, Narayanan A, Moftakhan H, Pavelsky T. Modeling and Analysis of Sediment Trapping Efficiency of Large Dams using Remote Sensing. American Geophysical Union. December 14, 2022. New Orleans.

Prajapati R**, Gardner J. Recovery of suspended sediment downstream of large dams in the US. American Geophysical Union. December 14, 2022. New Orleans.

Ramtel P, Feng D, Gardner J. Quantifying Spatiotemporal Variations in Riverine Phosphorus in the Continental United States Using Long-term Remote Sensing Data. American Geophysical Union. December 14, 2022. New Orleans.

Gardner J, Pavelsky T, Topp S, Yang X, Ross M. Drivers of declining suspended sediment across US rivers. American Geophysical Union. December 14, 2021. New Orleans.

Langhorst T, Altenau E, Gardner J, Pavelsky T. Global riverbank migration from 36 years of satellite imagery. American Geophysical Union. December 14, 2021. New Orleans.

Bruns N, Doyle M, Gardner J. Flow dependent patchiness in river color. American Geophysical Union. December 14, 2021. New Orleans.

Yang X, O'Reilley C, Gardner R, Ross M, Topp S, Wang J, Pavelsky T. The Color of Earth's Lakes: Leveraging Remote Sensing to Understand Global Patterns in Lake Responses to Environmental Change. Joint Aquatic Sciences Meeting. May 2022. Grand Rapids MI.

Gardner J, Ross M, Topp S, Yang X, Pavelsky T. Patterns and trends in suspended sediment in rivers across the US revealed by satellite remote sensing. American Geophysical Union. December 10, 2019. San Francisco.

Gardner J, Ensign S, Houser J, Doyle M. 2017. Light regimes in large rivers: flowapth, fixed-site, and synoptic approaches. International River Science Society. November 23, 2017. Hamilton, New Zealand.

Gardner J, Doyle M. 2017. Sediment-water surface area along rivers: water column vs. benthos. Society for Freshwater Science. June 5, 2017. Raleigh, NC.

Gardner J, Ensign S, Doyle M, Neve R. 2015. Eulerian versus Lagrangian perspectives on light availability in a large river. Society for Freshwater Science. May 17, 2015. Milwaukee, WI.

Gardner J. 2015. Measuring the pulse of a river: environmental sensing from different reference frames. Wisenet Seminar Series. November 17, 2015. Duke University.

Gardner J, Jordan T, Knee K, Fisher T. 2013. Quantifying N₂ and N₂O production in agricultural streams using open channel methods: a tool for finding missing watershed nitrogen. American Geophysical Union-Annual Meeting. December 13, 2013. San Francisco, CA. (*Outstanding Student Paper Award-Hydrology*).

Poster

Hall E, Sillen S**, Zuccolotto G**, Gardner J, Elliott E. Reconstructing Chlorophyll-a dynamics in a data-poor reservoir using Landsat. American Geophysical Union. December 2023. San Francisco.

Morogoda N, Cohen S. Gardner J, Munoz D, Narayanan A, Moftakhan H, Pavelsky T. Modeling and Analysis of Sediment Trapping Efficiency of Large Dams using Remote Sensing. American Geophysical Union. December 14, 2023. San Francisco.

Gardner J, Prum P**. The color of Earth's large rivers. American Geophysical Union. December 2022. Chicago, IL.

Hall E, Gardner J, Elliott E. Estimating Chlorophyll-a in Small Lakes in Northeastern US using Landsat. American Geophysical Union. December 2022. Chicago, IL.

Dente E**, Gardner J, Langhorst T, Yang X, Abad J, Pavelsky T. Multidecadal feedback between river migration and deforestation in the Amazon Basin. American Geophysical Union. December 2022. Chicago, IL.

Prum P**, Gardner J. Widespread Declines in Suspended Sediment Concentration in US Estuaries. American Geophysical Union. December 2022. Chicago, IL.

Moragoda N, Cohen S, Gardner J. Development of a New Reservoir Trapping Efficiency Parameter for Large Scale Sediment Modeling using Remote Sensing of Fluvial Sediment. European Geophysical Union. April 2022. Vienna, Austria.

Moragoda N, Cohen S, Gardner J. Using remote sensing of fluvial sediment for the development of a new reservoir trapping algorithm within a global sediment model. American Geophysical Union. December 14, 2021. New Orleans.

Narayanan A, Cohen S, Gardner J. Sediment response to deforestation in the Amazon Basin. CSDMS annual meeting. May 2022. Boulder, CO.

Gardner J, Ross M, Topp S, Yang X, Pavelsky T. Macroscale patterns in river color. American Geophysical Union. December 11, 2020. Virtual.

Gardner J, Pavelsky T, Doyle. 2018. The abundance, size, and spacing of lakes within river networks. American Geophysical Union. December 12, 2018. Washington DC.

Gardner J, Ensign S, Houser J, Doyle M. 2017. Light regimes in rivers using multiple measurement approaches. American Geophysical Union. December 13, 2017. New Orleans, LA.

Gardner J, Pivato M, Carniello L, Silvestri S, Marani M. 2016. Temperature dynamics in tidal flats and marshes. Wisenet Workshop. April 2016. Duke University.

Gardner J, Doyle M. 2015. Suspended and benthic sediment interaction with the water column along river continua. International River Science Society. August 25, 2015. LaCrosse, WI.

Gardner J, Jordan T, Knee K, Fisher T. 2012. Denitrification and N₂O emissions in agricultural streams. MEES Colloquium. September 27, 2013. Horn Point Laboratory, Cambridge, MD.

Gardner J, Gustafson A, Miklas J, Wilhelm J, Knee K, Jordan T, Fisher T. 2012. Nitrogen Fluxes from headwater streams in the Choptank Basin. Maryland Water Monitoring Council Annual Meeting. December 6, 2012. Baltimore, MD.

Gardner J, Stokely T, Tewes E, Tanner C, Oberneufemann R, Moore B, Bauer M, Motavalli P. 2010. Environmental monitoring of the University of Missouri campus: An example of active learning and student environmental activism. Missouri Natural Resources Conference. February 5, 2010. Osage Beach, MO,

Gardner J, Ortals J, Albers M, Goyne K, Kremer R. 2009. Investigating impacts of forest management on nitrifying bacteria in Ozark soils. Undergraduate Creative Achievements Forum. April 25, 2009. University of Missouri.

Gardner J, Anderson J, Peck S. 2007. Biochemical characterization of phosphoproteins involved in defense signaling pathways of *Arabidopsis thaliana*. Undergraduate Creative Achievements Forum. August 2007. University of Missouri.