Carla López Lloreda, Ph.D.
Fulbright Postdoctoral Fellow, Centre d'Estudis Avançats de Blanes, Spain

carla.lpez09@gmail.com | +1 787-635-9347
sites.google.com/vt.edu/carlalopezlloreda

EDUCATION

Ph.D. in Biological Sciences, Virginia Polytechnic Institute and State University 2020 – 2026
Advisor: Dr. Erin R. Hotchkiss
NSF GRFP Fellow and Interfaces of Global Change Fellow
Dissertation: *Environmental drivers of greenhouse gas dynamics in temperate and tropical wetlands*

B.Sc. in Environmental Sciences, University of Puerto Rico, Río Piedras 2011 – 2016
Magna Cum Laude
Undergraduate thesis: *The impacts of flood disturbance on animal-mediated nutrient cycling in Colorado streams*

PUBLICATIONS

Peer-reviewed journal articles

Wardinski, K., **López Lloreda, C.**, Corline, N., Lehmann, L., Peeler, K., McLaughlin, D., Hotchkiss, E., Ryan, K. A., Jones, C. N., Strahm, B., Palmer, M., & Scott, D. (2026). Water table rise sustains carbon release from soils in wetland-dominated landscapes: An intact soil core study. *Biogeochemistry*, *169*(4), 45. https://doi.org/10.1007/s10533-026-01328-w

Duvert, C., Borges, A. V., Calamita, E., Rocher-Ros, G., Linkhorst, A., Rosentreter, J. A., Liu, S., Taillardat, P., Attermeyer, K., DelSontro, T., Deirmendjian, L., Dixon, A. A., Grasset, C., Herreid, A. M., Jeffrey, L. C., Marcon, L., Mwanake, R. M., Paranaíba, J. R., Ran, L., Rexroade, A.T., Solano, V., Ulloa-Cedamanos, F., Wang, J., Whitmore, K.M., Zhang, L., **López-Lloreda, C.**, Macedo, M.N., Oviedo-Vargas, D., Riveros-Iregui, D.A., & Marzolf, N. S. (2025). Hydroclimate and landscape diversity drive highly variable greenhouse gas emissions from tropical and subtropical inland waters. *Nature Water*, *3*(11), 1303–1317. https://doi.org/10.1038/s44221-025-00522-8

Larsen, W. J., Torres, M. A., Chapela Lara, M., **López Lloreda, C.**, & McDowell, W. H. (2025). Flowpath Partitioning Controls Chemical Weathering Fluxes in the Tropics. *Water Resources Research*, *61*(4), e2024WR038521. https://doi.org/10.1029/2024WR038521

López Lloreda, C., Maze, J., Wardinski, K., Corline, N., McLaughlin, D., Jones, C. N., Scott, D., Palmer, M., & Hotchkiss, E. R. (2024). CO2 and CH4 Concentrations in Headwater Wetlands Influenced by Morphology and Changing Hydro-Biogeochemical Conditions. *Ecosystems*, *27*(7), 999–1019. https://doi.org/10.1007/s10021-024-00936-7

Lewis, A. S. L., O'Malley, G., Palissery, G. K., Hensley, A., **López Lloreda, C.**, Perez, C., & Bueren, E. K. (2023). Flipped Science Fair Invites Children to Judge Graduate Student Posters Through a University-Community Partnership. *The Journal of STEM Outreach*, *6*(1). https://doi.org/10.15695/jstem/v6i1.14

Herreid, A. M., **López Lloreda, C.**, Wymore, A. S., Potter, J. D., & McDowell, W. H. (2023). Greenhouse gas dynamics in tropical montane streams of Puerto Rico and the role of watershed lithology. *Biogeochemistry*, *162*(2), 163–175. https://doi.org/10.1007/s10533-022-00995-9

Rodríguez-Cardona, B., Wymore, A., Argerich, A., Barnes, R., Bernal, S., Brookshire, J., Coble, A., Dodds, W. K., Fazekas, H., Helton, A., Johnes, P., Johnson, S., Jones, J., Kaushal, S., Kortelainen, P., **López Lloreda, C.**, Spencer, R., & McDowell, W. H. (2022). Shifting stoichiometry: Long-term trends in

stream dissolved organic matter alter C:N ratios due to history of atmospheric acid deposition. *Global Change Biology, 28*(1), 98–114. https://doi.org/10.1111/gcb.15965

Wymore, A. S., Johnes, P. J., Bernal, S., Brookshire, E. N. J., Fazekas, H. M., Helton, A. M., Argerich, A., Barnes, R. T., Coble, A. A., Dodds, W. K., Haq, S., Johnson, S. L., Jones, J. B., Kaushal, S. S., Kortelainen, P., **López-Lloreda, C.**, Rodríguez-Cardona, B. M., Spencer, R. G. M., Sullivan, P. L., Yates, C.A., & McDowell, W. H. (2021). Gradients of Anthropogenic Nutrient Enrichment Alter N Composition and DOM Stoichiometry in Freshwater Ecosystems. *Global Biogeochemical Cycles*, *35*(8), e2021GB006953. https://doi.org/10.1029/2021GB006953

Grande, A., Schmidt, A. H., Bierman, P. R., Corbett, L. B., **López-Lloreda, C.**, Willenbring, J., McDowell, W. H., & Caffee, M. W. (2021). Landslides, hurricanes, and sediment sourcing impact basin-scale erosion estimates in Luquillo, Puerto Rico. *Earth and Planetary Science Letters*, *562*, 116821. https://doi.org/10.1016/j.epsl.2021.116821

Sihi, D., Xu, X., Salazar Ortiz, M., O'Connell, C. S., Silver, W. L., **López-Lloreda, C.**, Brenner, J. M., Quinn, R. K., Phillips, J. R., Newman, B. D., & Mayes, M. A. (2021). Representing methane emissions from wet tropical forest soils using microbial functional groups constrained by soil diffusivity. *Biogeosciences*, *18*(5), 1769–1786. https://doi.org/10.5194/bg-18-1769-2021

In process

Corline, N., Wardinski, K., **López Lloreda, C.**, Maze, J., Hotchkiss, E.R., Strahm, B., Badgley, B., Jones, C.N., Williams, M.R., Palmer, M.A., Scott. D.T., & McLaughlin, D.L. Water Chemistry Variation in a Low-Relief Wetlandscape: Implications for Local Processes and Downstream Export. In Review at *Hydrological Processes*.

López Lloreda, C., Martínez, G., Sotomayor, D., Iannucci, F., & Hotchkiss, E.R. Assessing the spatiotemporal variability and the impacts of salinization on CO_2 and CH_4 dynamics in tropical coastal wetlands. In Preparation for *Global Change Biology*.

Wardinski, K., Corline, N., **López Lloreda, C.**, McLaughlin, D.L., Hotchkiss, E.R., Jones, C.N., Williams, M.R., Palmer, M.A., & Scott. D.T. Dissolved organic matter dynamics in the surface water and porewater of two hydrologically dynamic wetlands during a precipitation event. In Preparation for *Hydrological Processes*.

Other publications and media

Riddle, R., McLaughlin, C., Dasho, O., Jain, A., & **López Lloreda, C.** (2025, April 12). Highlighting local voices in global change [StoryMap]. https://storymaps.arcgis.com/stories/645a93b6e3c049f38b1f1f500f014710

López Lloreda, C. (2024, January 2). Puerto Rico locals take sustainability into their own hands [StoryMap]. *Food, Water, and Communities.* https://storymaps.arcgis.com/stories/a086a84db8774e12821033d11b67ddb3

Rodríguez-Cardona, B. M., Pérez-Rivera, K. X., & **López-Lloreda, C.** (2023). Bringing Limnology and STEM Careers to Communities in Puerto Rico. *Limnology and Oceanography Bulletin*, *32*(2), 49–51. https://doi.org/10.1002/lob.10576

López Lloreda, C., Cáceres Charneco, R.I., & Ortiz Zayas, J. (2013). Manual de voluntarios: Monitoreo del hábitat acuático del Sapo Concho. Universidad de Puerto Rico, Río Piedras.

Datasets

López Lloreda, C., Maze, J., Wardinski, K., Corline, N., McLaughlin, D., Jones, C.N., Scott, D., Palmer, M., & Hotchkiss, E.R. (2024). Dissolved CO_2 and CH_4 dynamics in Delmarva headwater wetlands, 2020-2022 ver 1. Environmental Data Initiative. https://doi.org/10.6073/pasta/e74f71a429fc6d9f8db15fb5debcabc5

Wymore, A. S., Johnes, P. J., Bernal, S., Brookshire, J. E., Fazekas, H. M., Helton, A. M., Argerich, A., Barnes, R. T., Coble, A. A., Dodds, W. K., Haq, S., Johnson, S. L., Jones, J. B., Kaushal, S. S., Kortelainen, P., **López-Lloreda, C.**, Rodríguez-Cardona, B. M., Spencer, R. G., Yates, C. A., & McDowell, W. H. (2021). Stream Elemental Cycling (LTER Synthesis Working Group) ver 1. Environmental Data Initiative. https://doi.org/10.6073/pasta/50965f9e091ffa833da3c73bce2467fa

Sihi, D., **López-Lloreda, C.**, Brenner, J. M., Quinn, R. K., Phillips, J. R., Newman, B. D., & Mayes, M. (2020). Porewater data across a catena in the Luquillo Experimental Forest, Puerto Rico. ESS-DIVE Repository. https://doi.org/10.15485/1618869

AWARDS, FELLOWSHIPS & GRANTS

Awards

2022. Outstanding Master's Student, Virginia Tech College of Science ($500)
2016. Natural Sciences Faculty Award, University of Puerto Rico, Río Piedras

Fellowships

2025-2026. Principles of Community Dissertation Fellowship, Virginia Tech Department of Biological Sciences (~$10,000)
2025-2026. Noel Krieg Graduate Fellowship, Virginia Tech Department of Biological Sciences ($1,850)
2024-2025. John Palmer Scholarship, Virginia Tech Department of Biological Sciences ($1,300)
2024-2025. Roundtable Make a Difference Scholarship Finalist, Virginia Tech College of Science ($5,000)
2023-2024. Noel Krieg Graduate Fellowship, Virginia Tech Department of Biological Sciences ($2,000)
2023-2024. Society for Freshwater Science EMERGE Graduate Fellowship
2022-2023. Diversity Graduate Fellowship, Virginia Tech Global Change Center ($45,000)
2022. Yale Environmental Fellowship Program ($11,000)
2021-2022. William R. Walker Graduate Research Fellowship, Virginia Water Resources Research Center ($1,600)
2020-2025. National Science Foundation Graduate Research Fellowship ($138,000)
2020-2021. Graduate Opportunity Fellowship, Virginia Tech College of Science ($4,000)
2014-2015. Ecological Society of America SEEDS Undergraduate Research Fellowship ($12,000)

Grants

2026. *Linking oxygen and carbon dynamics to uncover dominant biogeochemical processes in wetlands.* Society for Freshwater Science General Endowment Award ($1,000)
2025. *Expanding the reach of freshwater science: engaging and supporting early career scientists in Puerto Rico.* Society for Freshwater Sciences Long Range Planning Committee Innovation Fund ($1,000)
2021. **Co-PI:** *Bringing Limnology and STEM careers to the classroom: Engaging with underrepresented high school students.* Association for the Sciences of Limnology and Oceanography Global Outreach Initiative ($2,085)
2022. *Integrating high-frequency carbon cycling and emissions dynamics in hydrologically dynamic wetland-dominated landscapes.* Society for Freshwater Science General Endowment Award ($1,000)
2021. *Wetland greenhouse gas dynamics in a changing world: the influence of land use in tropical coastal wetlands.* Society for Wetland Scientists Biogeochemistry Section Graduate Research Grant ($500)

Travel awards

2025. Society for Freshwater Science Conference Instars Graduate student meeting mentor ($500)
2024. Ecological Society of America SEEDS Graduate Student Travel Award ($1,500)
2024. BIOGEOMON Travel Award ($1,250)

2022. Society for Wetland Scientists Graduate Student Travel Award ($1,000)
2021. Society for Freshwater Science Conference Instars Graduate student meeting mentor ($500)
2020. Critical Zone Research Coordination Network American Geophysical Conference Travel Grant ($100)
2017. American Geophysical Union Conference Travel Support Relief Grant ($500)
2015. Ecological Society of America Conference SEEDS Student Travel Award ($1,000)
2015. Association for the Sciences of Limnology and Oceanography Conference Student Travel Award ($750)
2014. Ecological Society of America Conference SEEDS Student Travel Award ($1,000)

SELECTED PRESENTATIONS

[U] *Undergraduate mentee*

Oral presentations

López Lloreda, C., Maze, J., [U]Mulcahy, E., Corline, N., Wardinski, K., McLaughlin, D. L., Scott, D., Jones, C. N., Palmer, M., & Hotchkiss, E. R. (2026). Linking oxygen and carbon dynamics to characterize dominant biogeochemical processes in wetlands. *Society for Freshwater Sciences*, Spokane, WA.

López Lloreda, C., Sotomayor, D., Martínez Rodríguez, G., & Hotchkiss, E. R. (2026). Tropical coastal wetlands under global change: Impacts of environmental drivers on carbon cycling. Invited talk at *Virginia Tech Biological Sciences Research Day*, Blacksburg, VA.

López Lloreda, C., [U]Mulcahy, E., Maze, J., Wardinski, K., Corline, N., McLaughlin, D. L., Jones, C. N., Scott, D., Palmer, M., & Hotchkiss, E. R. (2025). Seasonal and short-term changes in carbon cycling in hydrologically dynamic wetlands. *Interfaces of Global Change Symposium*, Blacksburg, VA.

Wardinski, K., Corline, N., **López Lloreda, C.**, McLaughlin, D., Hotchkiss, E., Jones, C.N., Palmer, M., Williams, M., & Scott, D. (2024). Dissolved organic matter dynamics in surface water and porewater during precipitation driven shifts of the terrestrial-aquatic interface in hydrologically dynamic wetlands. *American Ecological Engineering Society Annual Meeting,* Blacksburg, VA.

López Lloreda, C., Maze, J., Wardinski, K., Corline, N., McLaughlin, D., Jones, C.N., Palmer, M., Scott, D., & Hotchkiss, E.R. (2024). Influence of surface water-groundwater interactions and hydrologic connectivity on greenhouse gases in headwater wetlands. *Virginia Tech Biological Sciences Research Day,* Blacksburg, VA.

López Lloreda, C., Herreid, A., Barreto Vélez, T., Gómez, J., Gutiérrez-Fonseca, P., & McDowell, W.H. (2024). Disturbances drive stream greenhouse gas changes and increased heterogeneity at the reach-scale. *BIOGEOMON*, San Juan, Puerto Rico.

Wardinski, K., **López Lloreda, C.**, Corline, N., Scott, D., Hotchkiss, E., McLaughlin, D., Jones, N., Maze, J., Palmer, M., & Williams, M. (2024). Dissolved organic matter release at the soil-water interface in isolated wetlands. *BIOGEOMON,* San Juan, Puerto Rico.

López Lloreda, C., Maze, J., Wardinski, K., Corline, N., McLaughlin, D., Jones, C.N., Palmer, M., Scott, D., & Hotchkiss, E.R. (2023). Influence of surface water-groundwater interactions and hydrologic connectivity on greenhouse gases in headwater wetlands. *Society for Freshwater Science Annual Meeting*, Brisbane, Australia.

Duvert, C., Marzolf, N.S., Linkhorst, A., Attermeyer, K., Calamita, E., DelSontro, T., Deirmendjian, L., Dixon, A., Grasset, C., Herreid, A.M., Jeffrey, L.C., Liu, S., **López Lloreda, C.**, Macedo, M.N., Marcon, L., Oviedo-Vargas, D., Paranaíba, J., Ran, L., Rexroade, A.T., Riveros-Iregui, D.A., Rosentreter, J., Solano, V., Taillardat, P., Wang, Jilong, Whitmore, K.M., Zhang, L., & Borges, A.V. (2023). A global database of greenhouse gas fluxes from tropical inland waters. *Society for Freshwater Sciences Annual Meeting*, Brisbane, Australia.

Lewis, A.S.L.*, **López Lloreda, C.***, O'Malley, G.*, Wander, H.L.*, Bueren, E.K., Drew, S., Hensley, A., Kroehler, C., Lowery, A.D., Palissery, G.K., Perez, C.E., Pihlstrom, C., & Raun, P. (2022). In Flipped Science Fair, Children Judge Graduate Posters and See Themselves as Scientists. *Joint Aquatic Sciences Meeting*, Grand Rapids, MI. *denotes co-presenters

Pérez-Rivera, K.X., Plont, S., [U]Wood, M., [U]DeToll, F., Niederlehner, B., Bretz, K., **López Lloreda, C.**, & Hotchkiss, E.R. (2021). Stream solutes respond differently within and across flow conditions. *European Geophysical Union,* Vienna, Austria.

López Lloreda, C., Herreid, A., & McDowell, W.H. (2021). The future of stream greenhouse gas dynamics in a stormier and drier tropical landscape. *Society for Freshwater Science Annual Meeting,* Virtual.

Hotchkiss, E.R., [U]Braswell, C., Bretz, K.A., Gray, A., **López Lloreda, C.**, [U]Morris, L., [U]Murphy, N., [U]Onozuka, B., Pérez Rivera, K, and Plont, S. (2021). A global assessment of organic carbon metabolism and spiraling in running waters. *Society for Freshwater Science Annual Meeting,* Virtual.

McDowell, W.H., **López Lloreda, C.,** Wymore, A., & Potter, J. (2019). Aquatic Sensors Reveal Ongoing Changes in Stream Nitrate Dynamics in a Tropical Montane Forest. *American Geophysical Union Fall Meeting,* San Francisco, CA.

McDowell, W.H., **López Lloreda, C.**, & Potter, J. (2018). Aquatic Sensors Provide New Insights into the Aquatic-Terrestrial Linkages that Govern Watershed Response to Major Hurricanes in a Tropical Montane Forest. *American Geophysical Union Fall Meeting,* Washington, D.C.

Quinn, R.K., Phillips, J., Brenner, J., **López Lloreda, C.**, & Mayes, M.A. (2018). The Response of Greenhouse Gas Emissions to Pulse Changes in Moisture Content in Tropical Rainforest Soils. *Geological Society of America Southeast Annual Meeting,* Knoxville, TN.

McDowell, W.H., Potter, J., & **López-Lloreda, C.** (2017). Short-term impacts of Hurricanes Irma and María on tropical stream chemistry as measured by in-situ sensors. *American Geophysical Union Fall Meeting,* New Orleans, LA.

Poster presentations

[U]Flota, A.L., Hotchkiss, E.R., **López Lloreda, C.**, & Pérez Rivera, K.X. (2026). Influence of Dredging on Dissolved Oxygen Dynamics in a Retention Pond. *Dennis Dean Undergraduate Research and Creative Scholarship Conference,* Blacksburg, VA.

López Lloreda, C. & Hotchkiss, E. R. (2025). CO_2 and CH_4 responses to increased salinization in two tropical coastal wetlands. *Society for Freshwater Science Annual Meeting,* San Juan, Puerto Rico.
I also presented this project in a Spanish lightning talk: "Impactos del aumento de la salinidad en CO_2 y CH_4 en dos humedales costeros tropicales."

[U]Flota, A.L., [U]Lucier, E.A., Hotchkiss, E.R., **López Lloreda, C.**, & Pérez Rivera, K.X. (2025). Calculating the Nutrient Retention Efficiency of the Duck Pond. *Society for Freshwater Science Annual Meeting,* San Juan, Puerto Rico.

[U]Mulcahy, E., **López Lloreda, C.**, Wardinski, K., Corline, N., & Hotchkiss, E.R. (2025). Linking Ecosystem Metabolism and Chlorophyll-a in Geographically Isolated Wetlands Across Seasonal and Hydrological Shifts. *Society for Freshwater Science Annual Meeting*, San Juan, Puerto Rico.

Wardinski, K., **C. López Lloreda**, N. Corline, E.R. Hotchkiss, D. McLaughlin, C.N. Jones, M. Williams, M. Palmer, & D. Scott. (2025). The influence of seasonal groundwater and precipitation events on the release of soil-derived dissolved organic matter in hydrologically dynamic wetlands. *Catchment Science Gordon Research Conference,* Andover, NH.

[U]Lucier, E.A., [U]Flota, A.L., Hotchkiss, E.R., Campo, K.A., Huo, J., Offhaus, C.E., Vaughn, B., Walters, E., **López Lloreda, C.**, & Pérez Rivera, K.X. (2025). Influence of Dredging on Water Chemistry in a Retention Pond. *Dennis Dean Undergraduate Research and Creative Scholarship Conference,* Blacksburg, VA.

López Lloreda, C., [U]Mulcahy, E., Maze, J., Wardinski, K., Corline, N., McLaughlin, D. L., Jones, C. N., Scott, D., Palmer, M., & Hotchkiss, E. R. (2024). Seasonal and short-term changes in carbon cycling in hydrologically dynamic wetlands. *American Geophysical Union Fall Meeting*, Washington, D.C.

Wardinski, K., **López Lloreda, C.**, Corline, N., Peeler, K., Lehmann, L., Groves, C., McLaughlin, D. L., Hotchkiss, E. R., & Scott, D. (2024). The role of surficial groundwater in driving dissolved organic matter release from soils in hydrologically dynamic wetlands. *American Geophysical Union Fall Meeting*, Washington, D.C.

[U]Cambridge, G., **López Lloreda, C.**, Hession, W.C., & Hotchkiss, E.R. (2024). Beaver Dam Analogs and Stream Restoration: Monitoring Hydrologic and Biogeochemical Changes in the Restoration of Flashy Agricultural Streams. *Virginia Tech Water Research Colloquium*, Blacksburg, VA.

López Lloreda, C., Martínez Rodríguez, G., Sotomayor, D., & Hotchkiss, E. R. (2024). Greenhouse gas dynamics in vulnerable tropical coastal wetlands: assessing the spatial variability and the potential impacts of saltwater intrusion. *Ecological Society of America*, Long Beach, CA.

[U]Mulcahy, E., **López Lloreda, C.**, Wardinski, K., Corline, N., & Hotchkiss, E.R. (2024). Assessing the Role of Phytoplankton on the Biogeochemistry in Geographically Isolated Wetlands. *Society for Freshwater Science Annual Meeting*, Philadelphia, PA.

Ondich, B., Romero, H., Ajavon, A., Ortiz Muñoz, L., Emer, L., Dionisio, A., Gonzalez, R., Presswood, D., Cunningham, C., Shiongyaj, C., Haggard, M., Bravo Ortiz, V., Vega Gómez, M., Mohamed, D., **López Lloreda, C.**, Quarterman, H., Allen, T., Troutman, A., Mendez, P., & McGarvey, D. (2024). Tightening the loose equilibrium concept: new insight from fish, insects and algae in NEON streams. *Society for Freshwater Science Annual Meeting*, Philadelphia, PA.

Rodríguez-Cardona, B.M., Pérez-Rivera, K.X., & **López Lloreda, C.** (2023). Aquaboricuas: Bringing Limnology and STEM Careers to Communities in Puerto Rico. *Association for the Sciences of Limnology and Oceanography,* Palma de Mallorca, Spain.

López Lloreda, C., Maze, J., McLaughlin, D., Jones, C.N., Palmer, M., Scott, D., & Hotchkiss, E.R. (2022). Linking greenhouse gas concentrations and changing inundation regimes in wetlands. *Joint Aquatic Sciences Meeting*, Grand Rapids, MI.

Linkhorst, A., Marzolf, N.S., Duvert, C., Deirmendijan, L., Herreid, A.M., Jeffrey, L.C., **López Lloreda, C.**, Macedo, M., Oviedo-Vargas, O., Riveros-Iregui, D.A., Solano-Rivera, V., Whitmore, K.M., & Borges, A. (2022). Greenhouse gas emissions from inland waters: A perspective and research agenda for the tropics and subtropics. *Joint Aquatic Sciences Meeting*, Grand Rapids, MI.

Herreid, A., **López Lloreda, C.,** Potter, J., & McDowell, W.H. (2020). Stream greenhouse gas dynamics in a tropical landscape. *American Geophysical Union Fall Meeting,* Virtual.

Larsen, W., Chapela Lara, M., **López Lloreda, C.,** McDowell, W.H., & Torres, M. (2020). Revisiting Solute Dynamics in the Luquillo Critical Zone Observatory Using Young Water Fractions. *American Geophysical Union Fall Meeting,* Virtual.

López Lloreda, C., Herreid, A., & McDowell, W.H. (2020). Tropical urban stream greenhouse gas dynamics. *Society for Freshwater Science Annual Meeting,* Virtual.

López Lloreda, C., McDowell, W.H., & Potter, J. (2019). Dissolved greenhouse gases in streams and their response to Hurricanes Irma and María in a tropical forest in Puerto Rico. *ASLO Aquatic Sciences Meeting,* San Juan, Puerto Rico.

López Lloreda, C., McDowell, W.H., & Potter, J. (2018). Dissolved greenhouse gases in streams and their response to Hurricanes Irma and María in a tropical forest in Puerto Rico. *American Geophysical Union Fall Meeting,* Washington, D.C.

Rodríguez-Cardona, B., Wymore, A., Coble, A.C., **López Lloreda, C.**, Podgorski, D.C., Zito, P., Spencer, R., Stanislavovich Prokishkin, A., & McDowell, W.H. (2018). Arctic stream resiliency and nutrient uptake dynamics across a wildfire chronosequence. *American Geophysical Union Fall Meeting,* Washington,

D.C.

Newman, B.D., Koger, J., Alonso-Rodríguez, A.M., **López Lloreda, C.**, Mayes, M.A., Perkins, G., Wood, T.E., & Xu, C. (2018). Spatial and Temporal Variability of Soil Pore Water Chemistry and Stable Isotopes at Tropical Three Hillslopes: El Yunque National Forest, Puerto Rico. *American Geophysical Union Fall Meeting,* Washington, D.C.

López Lloreda, C., McDowell. W.H., Mayes, M.A., Potter, J., & Newman, B. (2018). Hurricanes Irma and María drove a pulse of salts through soils and streams of a tropical watershed. *Ecological Society of America Annual Meeting,* New Orleans, LA.

López Lloreda, C., McDowell, W.H., & Potter, J. (2017). Dissolved Greenhouse Gas Concentration Patterns and Relationships with Stream Chemistry in Tropical Headwater Streams. *American Geophysical Union Fall Meeting,* New Orleans, LA.

Wymore, A., Kaushal, S., McDowell, W.H., Kortelainen, P., Bernhardt, E.S., Johnes, P., Dodds, W.K., Johnson, S., Brookshire, J., Spencer, R., Rodríguez-Cardona, B., Helton, A.M., Barnes, R., Argerich, A., Haq, S., Sullivan, P.L., **López Lloreda, C.**, Coble, A.A., & Daley, M. (2017). Carbon and nitrogen stoichiometry across stream ecosystems. *American Geophysical Union Fall Meeting,* New Orleans, LA.

Wymore, A., Rodríguez-Cardona, B., Coble, A.A., Potter, J., **López Lloreda, C.**, [U]Pérez Rivera, K.X., [U]De Jesús Román, A., Bernal, S., Martí Roca, E., Kram, P., Hruska, J., Stanislavovich Prokishkin, A., & McDowell, W.H. (2016). Examining the role of dissolved organic nitrogen in stream ecosystems across biomes and Critical Zone gradients. *American Geophysical Union Fall Meeting*, San Francisco, CA.

López Lloreda, C., Larson, E.I., MacNeill, K., Atkinson, C., Poff, L., Thomas, S.A., & Flecker, A.S. (2015). Variation in animal-mediated nutrient cycling across a flood-disturbance gradient in Colorado mountain streams. *Ecological Society of America Annual Meeting,* Baltimore, MD.

López Lloreda, C. & McCabe, D. (2015). Impacts of Bivalvia and Gastropoda shell production and their possible role as ecosystem engineers in Missisquoi Bay. *ASLO Aquatic Sciences Meeting,* Granada, Spain.

RESEARCH & WORK EXPERIENCE

Postdoctoral Researcher & Fulbright Fellow, September 2026 – present
Centre d'Estudis Avançats de Blanes, Spain

- Leading a project evaluating the impacts of low dissolved oxygen on carbon and nitrogen biogeochemistry in intermittent Mediterranean streams
- Collaborating with early career researchers on projects that examine the role of riparian zones on nitrogen cycling

Graduate Researcher, **Virginia Tech** August 2020 – May 2026

- Designed and led dissertation research examining how geomorphic and environmental drivers regulate carbon cycling and greenhouse gas dynamics in freshwater wetlands
- Contributed to interdisciplinary project data collection and synthesis aimed at advancing understanding of carbon cycling in geographically isolated wetlands
- Conducted multi-year field campaigns across wetland networks, integrating hydrologic monitoring, water chemistry, and greenhouse gas flux measurements
- Developed and implemented a controlled salinization experiment in Puerto Rico to assess the biogeochemical impacts of sea-level rise and saltwater intrusion on coastal wetlands
- Analyzed high-frequency sensor and field data in R using statistical and time-series approaches to evaluate hydrologic and biogeochemical dynamics

***Environmental Fellow,* Freshwater Future** May 2022 – August 2022

- Analyzed spatial patterns of lead concentrations in drinking water in Flint, Michigan using QGIS
- Supported research on lead service line replacement efforts and the impact on marginalized communities
- Developed outreach materials on drinking water safety for local stakeholders in English and Spanish

***Data Jam Project Coordinator,* Forward Research** August 2020 – December 2021

- Developed educational content and implemented workshops to teach middle and high-school students and teachers data analysis and research skills
- Served as the point of contact for students and teachers regarding questions about data and research project development; joined weekly working sessions with teachers and students

***Research Technician,* University of New Hampshire** May 2016 – July 2020

Supervisors: William H. McDowell and Melanie Mayes

- Led on-the-ground research efforts for the Luquillo Critical Zone Observatory, Luquillo Long-Term Ecological Research Network, and other research projects for the UNH Water Quality Analysis Lab
- Supervised and ran an array of soil sensors and greenhouse gas measurement chambers
- Supervised a field crew of 3 technicians (supervised a total of 10 technicians and students over 4 years)
- Supported field research for graduate students in Guadeloupe and Siberia

***Research Technician,* University of New Hampshire** June 2016 – August 2016

Supervisors: Adam Wymore and William H. McDowell

- Led fieldwork with two REU students for a project evaluating the role of dissolved organic nitrogen in stream nutrient uptake
- Analyzed water samples on analytical instrumentation for anions, cations, dissolved organic carbon, total dissolved nitrogen, ammonium, and phosphate

***Undergraduate Research Fellow*, Ecological Society of America SEEDS** April 2014 – August 2015

Mentor: Alexander S. Flecker, Cornell University

- Developed a research project focused on studying the impacts of a flood event on animal-mediated nutrient dynamics in streams
- Learned field methods in stream ecology and hydrology such as nutrient uptake, dilution gauging, stream characterization, and organic matter sampling

***Undergraduate Research Intern,* Vermont EPSCoR RACC** May 2013 – August 2013

- Developed a research project evaluating the influence of shell substrate availability on the abundance and diversity of macroinvertebrate communities
- Learned approaches for collection and processing of lake sediment and macroinvertebrates

***Undergraduate Researcher,* University of Puerto Rico** August 2012 – May 2014

Mentor: Jorge Ortiz Zayas

- Worked on research characterizing the aquatic habitat of the endangered native species, the Puerto Rican Crested Toad in the Guánica Dry Reserve Forest in Puerto Rico

RESEARCH WORKING GROUPS

***Invited Participant, Working Group:* Tropical inland greenhouse gases** (May 2021-present). Research leads: Clement Duvert, Nick Marzolf & Alberto Borges.

***Invited Participant, Working Group:* Global patterns in stream energy and nutrient cycling** (September 2016-December 2018). PIs: Adam Wymore & Sujay Kaushal. Supported by the Long-Term Ecological Research Network and National Center for Ecological Analysis and Synthesis.

INVITED TALKS, PANELS & SEMINARS

2024. Graduate school panel. Introduction to Graduate Studies, Virginia Tech.
2022. Graduate school panel. Careers in Biological Sciences undergraduate class, Virginia Tech.
2019. "Hydrology and biogeochemistry in El Yunque." Water Resources undergraduate class, University of Puerto Rico, Río Piedras.
2019. "Hydrology and biogeochemistry in El Yunque." Environmental Sciences graduate seminar, University of Puerto Rico, Río Piedras.

TEACHING & MENTORING

Teaching

***Graduate Teaching Assistant for Principles of Biology Lab,* Virginia Tech** January – May 2026

- Lead the lab component of an introductory Biology class, including delivering short lectures and grading

***Graduate Teaching Assistant for Ecology,* Virginia Tech** August – December 2025

- Supported a class of 134 students; assisted with student communications, grading, and office hours
- Delivered a lecture on the Global Carbon Cycle
- Organized exam review sessions

***Graduate Teaching Assistant for NSF GRFP Preparation Course,* Virginia Tech** August – December 2023

- Supported two sections of 9 and 11 undergraduate and early graduate students
- Reviewed and provided feedback on applications for all students in the class (total=20)
- Delivered a lecture on Broader Impacts in grant applications

Mentoring

***Undergraduate Research Mentor,* Virginia Tech** August 2021 – present

- Supervised and trained four undergraduate students:
    - *Alejandra Flota* (2025-present): supporting data analysis of nutrient retention dynamics in the Duck Pond, obtained funding for proposed work ($690)
    - *Emma Lucier* (2025): supported data analysis of nutrient retention dynamics in the Duck Pond
    - *Emily Mulcahy* (2023-2025): supported data analysis of sensor data, developed independent research project, obtained funding for proposed work ($300)
    - *Gavriel Cambridge* (2021-2023): supported the development of a research project studying the impacts of beaver dam on hydrology and carbon biogeochemistry, obtained funding for proposed work ($7,000)

***Mentor for NSF GRFP Preparation Course,* Virginia Tech** September 2024

- Provided mentoring to student applicants and feedback on GRFP essays (total of 5 applications reviewed)
- Participated as a graduate student panelist in the class

***REU Student Supervisor,* University of New Hampshire** Summer 2016

- Supervised and mentored two students, Katherine Pérez Rivera (UPR) and Albertyadir De Jesús Román (UPR), during fieldwork and in the laboratory during their REU research

***Summer Research Mentor,* University of New Hampshire** Summer 2015

- Helped develop an individual research project and provided mentoring to a summer undergraduate research student, Zoe Brown (Carleton College)

- Managed on-the-ground logistics for the implementation of the project

PROFESSIONAL DEVELOPMENT & TRAINING

Society for Freshwater Sciences Headwaters Leadership Academy August 2025 – present

- Selected through a competitive application process as part of a group of 12 early career scientists
- Participating in workshops on engagement within a professional society, career development, and mentorship

Long-Term Ecological Research Network Synthesis Skills for Early Career Researchers Course August 2024 – May 2025

- Selected through a competitive application process as part of a group of 25 early career researchers
- Received training in data management and analysis, synthesis research, and team science
- As part of this workshop, collaborated on a research project: "Carbon cycling responses to experimental disturbance across spatiotemporal scales"

Ecological Society of America SEEDS Critical Skills to Scale Up Ecology Workshop September – October 2021

- Selected through a competitive application process as part of a group of 12 graduate students
- Received training on reproducibility and version control using git
- Worked with NEON data to explore isotopic signatures of carbon in streams across the NEON network

SERVICE

University service

***Committee member,* VT Stream Team Mentoring Program** August 2024 – December 2025

- Coordinate a peer mentoring program by pairing early and later career students and organizing meet ups
- Participated as a mentor for 4 years

***Chair Diversity, Equity, and Inclusion,* VT Interfaces of Global Change GSO** August 2023 – May 2024

- Developed and led DEI initiatives and efforts to support community building and inclusion within the IGC student community

***Host,* VT Biological Sciences EEB seminar speaker** November 2023

- Invited and co-hosted Dr. Alex Moore for the Ecology, Evolution, and Behavior seminar series
- Organized a lunch with graduate students and facilitated meetings with faculty, graduate students, and postdocs across Biological Sciences department and the Interfaces of Global Change community

Service to scientific societies

***Co-founder & Organizer,* AquaBoricuas Network** 2025 – present

- Founded and lead a professional network connecting Puerto Rican scientists, students, and practitioners working in water resources and aquatic sciences
- Support mentoring, community-building, and visibility for Puerto Rican aquatic scientists

***Graduate student alumni mentor,* Ecological Society of America's SEEDS Leadership Meeting** September 2025

- Participated as the graduate student alumni mentor to 22 undergraduate student leaders from SEEDS chapters across the US
- Assisted with pre-meeting planning and on-site meeting logistics

***Member,* Society for Freshwater Sciences Conference Planning Committee** August 2024 – May 2025

- Contributed to planning and coordination of the annual meeting in San Juan, Puerto Rico including field trips, workshops, and reviewing conference abstracts

***Mentor,* Society for Freshwater Science Instars mentoring program** May 2021, May 2025

- Served as a graduate student mentor for the Instars program, a mentoring program that supports historically underrepresented students during the annual meeting
- Supported event planning for the program before the meeting through organizational meetings

***Reviewer,* Society for Freshwater Science Instars and EMERGE programs** 2022 – 2024

- Served as a reviewer for undergraduate applications (5 applications evaluated each year)

***Graduate student alumni mentor,* Ecological Society of America's SEEDS Annual Meeting** August 2024

- Participated as a mentor at the annual meeting to 17 undergraduate students

***Member,* Society for Freshwater Science Student Committee** August 2020 – May 2024

- Served as chair of the Diversity, Equity, and Inclusion sub-committee (2022-2023)
- Developed initiatives and supported DEI efforts within other SFS committees

***Member,* SFS Justice, Equity, Diversity, and Inclusion Task Force** August 2020 – May 2023

- Served as liaison between the SFS Student committee and SFS JEDI Task Force to improve communication, collaboration, and efficiency of JEDI initiatives across SFS
- Contributed to the *Initiatives in Spanish* initiative by translating society resources into Spanish and producing Spanish-language media content

***Member,* Ecological Society of America SEEDS UPR Chapter** January 2014 – May 2016

- Engaged in local and national SEEDS activities, including leadership meetings focused on current issues and solutions in ecology
- Served as board member of the UPR chapter (January 2015-May 2015)
- Developed and implemented ecology and environmental outreach activities for students and communities

Conference symposia

***Accepted special session co-convener*, Society for Freshwater Sciences Annual Meeting** May 2026

- Co-convener of the accepted session "Lakes, ponds, reservoirs and wetlands oh my! Drivers, feedbacks, and responses of the carbon cycle under changing climate and anthropogenic stressors" (with co-conveners Phoenix Rogers, Shuo Chen, & Natalie Griffiths)

***Special session co-convener*, Society for Freshwater Sciences Annual Meeting** May 2025

- Served as co-convener and moderator of the session "Bridging Language Barriers: Engaging with Spanish-Speaking Communities in Freshwater Science Research" (with co-conveners Katherine Pérez Rivera, Liz Díaz Ortiz, & Bianca Rodríguez Cardona)

***Special session co-convener*, Joint Aquatic Sciences Meeting** May 2022

- Served as co-convener of the session "Carbon fluxes across ecosystem interfaces: Sources, cycling, and fate" (with co-conveners Erin Hotchkiss, Margaret Palmer, Katherine Wardinski, Stephen Plont, Daniel McLaughlin, & Jacob Diamond)

***Special session co-convener,* Society for Freshwater Science Annual Meeting** May 2021

- Served as co-convener of the session "Greenhouse gases in tropical streams, rivers, lakes and wetlands:

current work and future research needs" (with co-conveners Nicholas Marzolf, Clément Duvert, Diego Riveros-Iregui, & Marcelo Ardón)

Community outreach and education

***Exhibitor,* Virginia Tech Science Festival** 2022 – 2025

- Hosted an interactive exhibit on stream aquatic insects and the effect of land cover on water quality

***Presenter,* Virginia Tech Stream Outreach** November 2024

- Presented hands-on freshwater ecology and water quality activities in the biology class at a local high school

***Panelist,* Virginia Tech Biological Sciences Facultea series** February 2024

- Along with other graduate students, talked with undergraduate students about my research and answered questions about graduate school and freshwater ecology

***Panelist,* Conversatorio: El manifiesto de estudios de desastres** May 2022

- Panelist of a Spanish-language discussion on the implications of ecological research after a disaster

***Planning committee member,* Flipped Science Fair Event** August 2021 – February 2022

- Co-developed the Flipped Science Fair project, in which middle school students participated in a Science Fair and evaluated graduate student research project presentations
- Contributed to the development of workshops aimed at providing professional development opportunities in science communication to graduate student presenters

***Exhibitor,* Blacksburg Seek Education Explore Discover Summer Camp** July 2021

- Helped coordinate and implement hands-on freshwater and ecology learning activities for a group of 15 middle school students

***Technical support,* Luquillo LTER Schoolyard Outreach program** May 2017 – May 2021

- Led field protocol training in water quality and aquatic ecology for middle and high school students and teachers
- Developed and delivered workshops for the Data Jam project on research methods and using long-term ecological data

***Panelist,* Ecological Society of America SEEDS Graduate School panel** November 2020

- Participated as one of four panelists who spoke about the graduate school experience and application process and provided guidance on how to apply to graduate school

***Organizer,* Luquillo Critical Zone Observatory Seminar Series** August – December 2019

- Collaborated with professors from the University of Puerto Rico and developed and co-organized a seminar series with speakers from the Luquillo CZO to showcase to undergraduate and graduate students the current research and data available for their use

***Organizer and participant,* NEON Explore workshop** November 2019

- Co-organized and participated in a 3-day NEON Explore workshop at the University of Puerto Rico
- Led the recruitment and participation of 20 undergraduate and graduate Puerto Rican students and 5 faculty

Peer review

Journal articles 2023 – present

- Served as reviewer for: *Journal of Geophysical Research: Biogeosciences*, *Scientific Reports, and Global Biogeochemical Cycles* (total of 3 reviews)