Marie J. Kurz – Curriculum Vitae

Senior Scientist, Biogeochemistry Section Leader & Assistant Research Professor

Patrick Center for Environmental Research
The Academy of Natural Sciences of Drexel University
1900 Benjamin Franklin Parkway
Philadelphia, PA 19103, USA

Tel.: (267) 231-6679
Email: mjkurz@email.wm.edu
marie.kurz@drexel.edu
Web: mariekurz.weebly.com

RESEARCH INTERESTS

Coupled dynamics of ecology and geochemistry in freshwater systems; Solute transport & (bio)transformation; Whole-stream ecosystem function; Groundwater-surface water interactions; Catchment-scale solute & ecosystem dynamics; Restoration & (adaptive) management of water resources & aquatic ecosystems.

EDUCATION

Ph.D., 2013 *Geology*, University of Florida, Gainesville, FL
Environmental Engineering Sciences graduate minor, Hydrologic Sciences certificate

B.S., 2007 *Geology*, The College of William & Mary, Williamsburg, VA,
Environmental concentration, Anthropology minor

ACADEMIC & PROFESSIONAL HISTORY

2016 – present *Senior Scientist* & *Biogeochemistry Section Leader*, Patrick Center for Environmental Research, The Academy of Natural Sciences of Drexel University

2016 – present *Assistant Research Professor*, Department of Biodiversity, Earth & Environmental Science, Drexel University

2013 – 2016 *Staff Scientist* (*Wissenschaftliche Mitarbeiter*), Dept. Hydrogeology, Helmholtz Center for Environmental Research – UFZ

2007 – 2013 *Alumni Fellow* & *Graduate Research Assistant*, Dept. of Geological Sciences, University of Florida

2007 – 2011 *NSF IGERT (Integrated Graduate Education & Research Traineeship) Fellow*, "Adaptive Management: Wise use of Water, Wetlands & Watersheds", University of Florida

2006 (3mo) *NSF REU (Research Experience for Undergraduates) Trainee*, University of Arkansas

PUBLICATIONS

18. Ward A.S., Wondzell S.M., Schmadel N.M., Herzog S., Zarnetske J.P., Baranov V.*, Blaen P.J., Brekenfeld N.*, Chu R., Derelle R., Drummond J.D., Fleckenstein J., Garayburu-Caruso V., Graham E., Hannah D., Harman C., Hixson J., Knapp J.L.A., Krause S., **Kurz M.J.**, Lewendowski J., Li A.*, Marti E., Miller M., Milner A.M., Neil K.*, Orsini L., Packman A.I., Plont S.*, Renteria L., Roche K.*, Royer T., Segura C., Stegen J., Toyoda J., Wells J., & Wisnoski N.I. (2019) Spatial and temporal variation in river corridor exchange across a 5th order mountain stream network, *Hydrol. Earth Syst. Sci.* 23(12): 5299-5335.
17. Comer-Warner S.*, Knapp J.L.A, Blaen, P.J., Klaar M.J., Shelley F., Zarnetske J.P., Lee-Cullin J., Folegot S.*, **Kurz M.J.**, Lewandowski J., Harvey, J., Ward A.S., Mendoza-Lera C., Ullah S., Datry T., Kettridge N., Gooddy D., Drummond J.D., Marti E., Milner A.M., Hannah D.M., Krause S. (2020) The method controls the story - sampling method impacts on the detection of pore-water nitrogen concentrations in streambeds. *Sci. of the Tot. Envi.* 709: 136075.

16. Ward A.S., **Kurz M.J.**, Schmadel N., Knapp J.L.A., Blaen P.J., Harman C.J., Drummond J.D., Hannah D.M., Krause S., Li A.*, Marti E., Milner A., Neil K.*, Plont S.*, Packman A.I., Wisnoski N.I., Wondzell S.M., Zarnetske J.P. (2019) Solute transport and transformation in an intermittent, headwater mountain stream with unsteady discharge. *Water* 11(11): 2208.
15. Ward A.S., Zarnetske J.P., Baranov V., Blaen P.J., Brekenfeld N., Chu R., Derelle R., Drummond J.D., Fleckenstein J., Garayburu-Caruso V., Graham E., Hannah D., Harman C., Hixson J., Knapp J.L.A., Krause S., **Kurz M.J.**, Lewendowski J., Li A., Marti E., Miller M., Milner A.M., Neil K., Orsini L., Packman A.I., Plont S., Renteria L., Roche K., Royer T., Schmadel N.M., Segura C., Stegen J., Toyoda J., Wells J., Wisnoski N.I., & Wondzell S.M. (2019) Co-located contemporaneous mapping of morphological, hydrological, chemical, and biological conditions in a 5th order mountain stream network, Oregon, USA, *Earth Syst. Sci. Data,* https://doi.org/10.5194/essd-2019-45
14. Kelleher C., Ward A., Knapp J.L.A., Blaen P.J., **Kurz M.J.**, Drummond J.D., Zarnetske J. P., Hannah D.M., Mendoza-Lera C., Schmadel N.M., Datry T., Lewandowski J., Milner A.M., & Krause S. (Accepted) Exploring tracer information and model framework trade-offs to improve estimation of stream transient storage processes. *Water Resources Research*, 55: 3481-3501.
13. Blaen P.J., **Kurz M.J.**, Drummond J.D., Knapp J.L.A., Mendoza-Lera C., Schmadel N.M., Klaar M.J., Jäger A.*, Folegot S.*, Lee-Cullin J., Ward A.S., Zarnetske J.P., Datry T., Milner A.M., Lewandowski J., Hannah D.M., Krause S. (2018) Woody debris is related to reach-scale hotspots of lowland stream ecosystem respiration under baseflow conditions. *Ecohydrology* 11(5): e1952.
12. Folegot S.*, Hannah D.M., Dugdale S.J., **Kurz M.J.**, Drummond J.D., Klaar M.J., Lee-Cullin J.*, Keller T., Marti E., Zarnetske J.P., Ward A.S., & Krause S. (2018) Low flow controls on stream micro-thermal dynamics. *Limnologica* 68: 157-167.
11. Baranov, V.*, Milošević, D., **Kurz, M.J.**, Zarnetske, J.P., Sabater, F., Marti, E., Robertson, A., Brandt, T.*, Sorolla, A., Lewandowski, J., and Krause, S. (2017) Helophyte impacts on the response of hyporheic invertebrate communities to inundation events in intermittent streams. *Ecohydrol*. 10(6): e1857.
10. **Kurz M.J.**[†], Drummond J.D.[†], Marti E., Zarnetske J.P., Lee-Cullin J.*, Klaar M.J., Folegot S.*, Keller T., Ward A.S., Fleckenstein J.H., Datry T., Hannah D.M., & Krause S. (2017) Impacts of water level on metabolism and transient storage in vegetated lowland rivers - insights from a mesocosm study. *J. Geophys. Res. Biogeosci* 122 (3): 628-644.
9. Khadka M.B., Martin J.B. & **Kurz M.J.** (2017) Synoptic estimates of diffuse groundwater seepage to a spring-fed karst river at high spatial resolution using an automated radon measurement technique. *J. Hydrology* 544: 86-96.
8. Vieweg M.*, **Kurz M.J.**, Trauth N., Fleckenstein J.H., Musolff A. & Schmidt C. (2016) Estimating time-variable aerobic respiration in the streambed by combining electrical conductivity and dissolved oxygen time-series, *J. Geophys. Res. Biogeosci* 121(8): 2199-2215.
7. Martin J.B., **Kurz M.J.** & Khadka M.B. (2016) Climate control of decadal-scale increases in apparent ages of eogenetic karst spring water. *J. Hydrology* 540: 988-1001.
6. Schmadel N.M., Ward A.S., **Kurz M.J.**, Fleckenstein J.H., Zarnetske J.P., Hannah D.M., Blume T., Vieweg M.*, Blaen P.J., Schmidt C., Knapp J.L.A.*, Klaar M.J., Romeijn P.*, Datry T., Keller T., Folegot S.*, Marruedo A.I.* & Krause S. (2016) Stream solute tracer timescales changing with discharge and reach length confound process interpretation. *Water Resour. Res.* 52: 3227–3245.
5. **Kurz M.J.**, Martin J.B., and Cohen M.J. (2015) Diffusion and seepage-driven element fluxes from the hyporheic zone of a karst river. *Freshwater Science* 34(1), 206-221.
4. **Kurz M.J.**, deMontety V., Martin J.B., Cohen M.J., and Foster C. (2013) Controls on diel metal cycles in a biologically productive carbonate-dominated river. *Chemical Geology* 358: 61-74.

3. Cohen M.J., **Kurz M.J.**, Heffernan J.B., Martin J.B., Douglass R.L., Foster C.R., and Thomas R.G. (2013) Diel phosphorus variation and the stoichiometry of ecosystem metabolism in a large spring-fed river. *Ecological Monographs* 83(2), 155-176.
2. de Montety V., Martin J.B., Cohen M.J., Foster C. and **Kurz M.J.** (2011) Influence of diel biogeochemical cycles on carbonate equilibrium in a karst river. *Chemical Geology* 283(1-2), 31-43.
1. de Montety V., Martin J.B., **Kurz M.J.**, Cohen M.J. and Foster, C. (2010) Influence of biogeochemically induced carbonate cycles on metals content of a karst river, *in* Birkle P. & Torres-Alvarado I.S., eds., Water-Rock Interaction XIII: Taylor & Francis Group, London. ISBN 978-0-415-60426-0

*†Authors contributed equally, *Student authors*

FUNDING

National Fish and Wildlife Foundation, *Delaware River Restoration Fund Project Impact Assessment: Year 1*. PI: S.A. Kroll, Co-PI: **M.J. Kurz**. July 2020 – Sept 2021. Total Award: $280,960

Open Space Institute, *Land Protection Impact Assessment: Phase 1*. PI: S.A. Kroll, Co-PIs: **M.J. Kurz**, D. Keller. Oct 2019 – March 2020. Total Award: $50,813

Pennsylvania Department of Environmental Protection (PADEP), *Review of human health effects of PFAS in support of MCL development*. PI: R. Hamilton, Co-PIs: E. Chernak, C.N. Haas, **M.J. Kurz**, R. McKeever, C.M. Sales, D. Vearrier. Dec 2019 – Dec 2020. Total Award: $213,508

Strategic Environmental Research and Development Program (SERDP), *Uptake and bioaccumulation/ biomagnification of subsurface-derived PFASs by lotic, warm water food webs*. Lead PI: **M.J. Kurz**, Co-PIs: E.R. McKenzie (Temple U), C. Sales (Drexel U), D. Spooner (Lock Haven U), C. Blakeslee (USGS). Sept. 2019 – Sept. 2022. Total Award: $1,436,515

William Penn Foundation, *Comprehensive Scientific Direction for Planning, Implementing, and Evaluating the Delaware River Watershed Initiative*. Project Lead: R.J. Wall, Key Personnel: S.A. Kroll, C. Collier, **M.J. Kurz**, S. Haag. Jan 2018 – Dec 2021. Total Award: $3,200,000

Whitemarsh Foundation, *Characterization of Existing Aquatic and Terrestrial Conditions in the Erdenheim Farm Valley*. Project Lead: W. Ryan, Key Personnel: F.W. Acker, R.J. Horwitz, S. Kroll, **M.J. Kurz**. Aug. 2017 – Sept. 2019. Total Contract: $152,000

National Science Foundation (NSF), *RAPID: Collaborative Research: Evaluating Ecosystem Respiration in Urban Streams Using Reactive Tracer and Dissolved Oxygen Loggers*. Co-PI: S. Ledford (Temple U), **M.J. Kurz**. Aug 2017 – July 2018. Total Award: $24,776

Delaware River Basin Commission (DRBC), *Professional Services for Biological Monitoring Program Support*. Project Lead: **M.J. Kurz**. Key Personnel: D.F. Charles, S. Haag, R.J. Horwitz, S.A. Kroll, J. Doi (Limnotech). Aug. 2017 – July 2022. Total Contract: $300,000

AWARDS & HONORS

Invited Presenter, EGU General Assembly, 2016
Cover feature article, Ecological Monographs Vol. 83, Issue 2, 2013
Horn Award (Outstanding Graduate Student), Dept. Geological Sciences, Univ. of Florida, 2012
NSF-IGERT Graduate Fellowship, University of Florida, 2007
Alumni Graduate Fellowship, University of Florida, 2007
NSF-REU Fellowship, University of Arkansas, 2006
Howard Hughes Medical Institute Freshman Research Grant, William & Mary, 2003

INVITED SEMINARS

2019: Villanova University, Dept. of Geography and the Environment
Drexel University, Engaging the Environment: An Interdisciplinary Symposium

Drexel University, Water and Well-Being: Global Approaches to Water Management Symposium
2017: Oak Ridge National Lab, Earth Sciences Group
Drexel University, Biodiversity, Earth & Environmental Sciences Dept.
Temple University, Dept. Earth & Environmental Science
2016: Univ. of Tubingen, Center of Applied Geosciences, GeoEnviron Seminar Series
The Academy of Natural Sciences of Drexel University
2013: Helmholtz-UFZ, Dept. of River Ecology (FLOEK)
2012: Univ. of Florida, Dept. Geological Sciences
2011: Univ. of Florida, Howard T. Odum Center for Wetlands 'Water Wetlands & Watersheds' Series
2008: Univ. of Florida, Dept. Geological Sciences, Brown Bag Seminar

SELECT CONFERENCE ABSTRACTS

Kurz M.J. & Kroll S.A. (2019) Evaluating Large-Scale Stressor and Restoration Impacts on Water Quality and Ecosystem Integrity in the Delaware River Watershed [Poster]. *American Geophysical Union Fall Meeting*, San Francisco, CA.

Kurz M.J., Perez L., Kroll S.A., Christopher K & Haag S. (2019) Getting the Data Out There: Lessons Learned From Integrating Science Into Watershed Conservation [Poster]. *American Geophysical Union Fall Meeting*, San Francisco, CA.

Ward A.S., Zarnetske J.P., Berna S., Drummond J.D., Brekenfeld N., Graham E.B., Hannah D. M., Klaar M.J., **Kurz M.J.**, Krause S., Li A., Lupon, A., Mao F., Marti E., Ouellet V., Packman A.I., & Stegen J. (2019) How and why do physical, chemical, and biological characteristics (co)vary through space in a 5th order river basin? (*Invited*) *American Geophysical Union Fall Meeting*, San Francisco, CA.

Kurz M.J., McKenzie E., Sales C., Spooner D., & Blakeslee C. (2019) Uptake and bioaccumulation/ biomagnification of subsurface-derived PFASs by lotic, warm water food webs [Poster]. *SERDP-ESTCP 2019 Symposium.*

Kurz M.J., McKenzie E., Sales C., Spooner D., & Blakeslee C. (2019) Uptake and Bioaccumulation/Biomagnification of Subsurface-Derived PFAS by Stream Food Webs [Poster]. *SETAC North America Focused Topic Meeting: Environmental Risk Assessment of* PFAS, Durham, NC.

Kurz M.J., Haag S., Kroll S.A., Collier C., & Wall R. (2018) Science-Driven Protection of Source Water Quality and Ecosystem Integrity in the Delaware River Basin [Poster]. *American Geophysical Union Fall Meeting*, Washington DC.

Kurz M.J., Ledford S.H., Ward A.S., & Toran L. (2018) Point Source Nutrient Effects on Metabolic Activity and Reactive Solute Transport in an Urban Stream [Poster]. *American Geophysical Union Fall Meeting*, Washington DC.

Collier C. & The Academy of Natural Sciences' DRWI team (2018) Data-driven source water protection initiative: Prioritizing actions using scientific evidence. *American Geophysical Union Fall Meeting*, Washington DC.

Kroll A.K., Oakland H.C., Jackson J.K., Sweeney B., Battle J., **Kurz M.J.**, & Collier C. (2018) Macroinvertebrate communities and habitat conditions for setting targets for agricultural BMP restoration [Poster]. *American Geophysical Union Fall Meeting*, Washington DC.

Ward A.S., Harman C.J., Schmadel N.M., **Kurz M.J.**, Blaen P., Wondzell S.M., Drummond J.D., Hannah D.M., Knapp J.L.A., Krause S., Li A., Martí E., Miller M., Milner A., Neil K., Plont S., Roche K.R., Packman A.I., Wisnoski N., & Zarnetske J.P. (2018) How do evapotranspiration-driven discharge fluctuations alter reach-scale ecosystem function? *(Invited) American Geophysical Union Fall Meeting*, Washington DC.

Ward A.S., Herzog S., Wondzell S.M., Schmadel N.M., Blaen P., Drummond J.D., Hannah D.M., Harman C.J., Knapp J.L.A., Krause S., **Kurz M.J.**, Li A., Martí E., Miller M., Milner A., Neil K., Plont S., Roche K.R., Packman A.I., Wisnoski N., & Zarnetske J.P. (2018) Spatial and temporal relationships between

hydrologic forcing, geologic setting, and river corridor exchange in a mountain stream network. *American Geophysical Union Fall Meeting*, Washington DC.

Krause S., Comer S., Brekenfeld N., Blaen P., Ullah S., Kettridge N., Hannah D., Romeijn P., Bonnet B., Gooddy D., Drummond J., Marti E., **Kurz M.**, Mendoza-Llera C., Baranov V., Lewandowski J., Ward A., & Zarnetske J. (2018) Quantifying microbial metabolic activity by the Resazurin/Resorufin smart tracer system from plot to catchment scales. *EGU General Assembly*, Vienna, Austria.

Kurz M.J. & Schmidt C. (2017) Coupled Spatio-Temporal Patterns of Solute Transport, Metabolism and Nutrient Uptake in Streams. *American Geophysical Union Fall Meeting*, New Orleans, LA.

Martin J.B., Brown A.L., **Kurz M.J.**, Khadka M.B. & Kamenov G.D. (2017) Springs: Windows into decadal-scale karst aquifer processes (Invited). *Geological Society of America Annual Meeting*, Seattle, WA.

Kurz M.J., Kroll S.A. & Velinsky D. (2017) Restoring and protecting water quality and ecosystem integrity in the Delaware River Watershed. *6th International Multidisciplinary Conference on Hydrology and Ecology (HydroEco)*, Birmingham, UK.

Kurz M.J., Drummond J.D., Marti E., Zarnetske J.P., Lee-Cullin J., Klaar M.J., Folegot S., Keller T., Ward A.S., Fleckenstein J.H., Datry T., Hannah D.M., & Krause S. (2016) Impacts of water level on metabolism and transient storage in vegetated lowland rivers - insights from a mesocosm study [Poster*]. American Geophysical Union Fall Meeting*, San Francisco, CA.

Kurz M.J., Schmidt C., Blaen P., Knapp J.L.A., Drummond J.D., Martí E., Zarnetske J.P., Ward A.S., Krause S., The Leverhulme Hyporheic Zone Network Team (2016) Attempting to link hydro-morphology, transient storage and metabolism in streams: Insights from reactive tracer experiments (*Invited*). *EGU General Assembly*, Vienna, Austria.

Kurz M.J., Cohen M.J., Martin J.B., Nifong R.L. (2016) Feedbacks between element availability, (diel) cycling and assimilatory uptake in a biologically productive spring-fed river. *EGU General Assembly*, Vienna, Austria.

Blaen P., **Kurz M.J.**, Knapp J.L.A., Mendoza-Lera C., Lee-Cullin J., Klaar M.J., Drummond J.D., Jaeger A., Zarnetske J.P., Lewandowski J., Martí E., Ward A.S., Fleckenstein J., Datry T., Larned S., Krause S. (2016) Multi-scale controls on spatial variability in river biogeochemical cycling. *EGU General Assembly*, Vienna, Austria.

Kurz M.J., Schmidt C., Anlanger C., Risse-Buhl U., von Schiller D. (2015) Influence of stream morphology on metabolism and reactive solute transport. *Goldschmidt*, Prague, Czech Republic.

Kurz M.J., Schmidt C., Fleckenstein J.H., Keller T., Krause S., Romeijn P., Blaen P., Klaar M.J., Hannah D., Knapp J., Ward A.S., Larned S., Zarnetske J.P. (2015) Spatial and temporal dynamics of hyporheic respiration under variable discharge conditions*. 5th International Multidisciplinary Conference on Hydrology and Ecology (HydroEco)*, Vienna, Austria.

Schmidt C., **Kurz M.J.**, Fleckenstein J.H. (2015) Non-parametric estimation of subreach solute travel time distribution from multiple tracer breakthrough curves. *EGU General Assembly*, Vienna, Austria.

Cohen M.J., Nifong R.L., **Kurz M.J.**, Cropper W.P., Martin J.B. (2014) Stoichiometry, metabolism and nutrient limitation across the periodic table in natural flowing-water chemostats (*Invited*). *American Geophysical Union Fall Meeting*, San Francisco, CA.

Kurz M.J., Schmidt C., Knapp J.L.A., Romeijn P., Blaen P., Klaar M.J., Keller T., Krause S., Ward A.S., Fleckenstein J.H., Larned S., Zarnetske J.P., Martí E. (2014) Spatial and temporal dynamics of hyporheic respiration under variable discharge conditions. *American Geophysical Union Fall Meeting*, San Francisco, CA.

Kurz M.J., Martin J.B., Cohen M.J., de Montety V., Nifong R.L. (2013) Elemental sources, cycling and ecological availability in rivers in carbonate terrains: An interdisciplinary perspective. *American Geophysical Union Fall Meeting*, San Francisco, CA.

Kurz M.J., Martin J.B. and Cohen M.J. (2012) Interactions Between Diffuse Groundwater Recharge and Hyporheic Zone Chemistry in Spring-Fed River: Implications for Metal, Nutrient & Carbonate Cycling [Poster]. *American Geophysical Union Fall Meeting*, San Francisco, CA.

Kurz M.J., Martin J.B., Cohen M.J., de Montety V., Douglass R.L. (2012) Geochemical and biological controls on diel (24-hr) element cycling in a carbonate-dominated river. *Geological Society of America Annual Meeting*, Charlotte, NC.

Kurz M.J., Martin J.B., Cohen M.J., Douglass R.L., Foster C. (2012) Influence of autotrophic assimilation on diel elemental cycling in a spring-fed river [Poster]. *3rd University of Florida Water Institute Symposium*, Gainesville, FL.

Kurz M.J., Martin J.B, Cohen M.J. Douglass R.L., Foster C. (2011) Influence of autotrophic assimilation on diel cycling of major and trace elements in streams. *American Geophysical Union Fall Meeting*, San Francisco, CA.

Kurz M.J., Martin J.B., Cohen M.J. (2010) Pore-Water Chemistry and Hydrology in a Spring-Fed River: Implications for Hyporheic Control of Nutrient Cycling and Speleogenesis [Poster]. *American Geophysical Union Fall Meeting*, San Francisco, CA.

Kurz M.J., Martin J.B., de Montety V., Cohen M.J., Foster C. (2010) Pore-water chemistry in a spring-fed river: Implications for hyporheic control of nutrient cycling and speleogenesis [Poster]. *2nd University of Florida Water Institute Symposium*, Gainesville, FL.

Kurz M.J., Martin J.B., de Montety V. (2009) Pore-water chemistry in a spring-fed river: Implications for hyporheic control of nutrient cycling and speleogenesis [Poster]. *Geological Society of America Annual Meeting*, Portland, OR.

Kurz M., and Hancock G. (2007) Looking for 'Landscape Knickzones' in the Virginia Piedmont: Evaluating Landscape Disequilibrium Through GIS-Based Analysis of Hillslopes and Channels. *Annual Meeting of the Southeastern Section of the Geological Society of America*, Charleston, SC.

Kurz M., Patton J., Boss S. (2006) Comparative Geomorphic Analysis of Three Sub-Watersheds of Beaver Reservoir, Northwest Arkansas [Poster]. *Geological Society of America Annual Meeting*, Philadelphia, PA.

TEACHING

Drexel University

Geochemistry (GEO 309) – 3 credit course + recitation (2018, 2020). Majors course introducing the theoretical basis and common applications of geochemistry in geology and environmental science. Topics include composition of the earth, thermodynamics, kinetics, solubility, redox reactions, and isotope geochemistry.

Groundwater Geology (GEO 412) – 4 credit course + lab (2018, 2019). Majors course introducing the theoretical basis and practical techniques of hydrogeology with an emphasis on case studies. Topics include groundwater flow and storage, aquifer pumping, contaminant transport, and karst.

University of Florida

Florida Geology Lab (GLY 1150L, 2 sections) – Instructor for 1 credit x 2 sections (2012). Non-majors course introducing the principles of geology, geologic history, geologic resources and geologically related environmental problems through local case studies and field visits. Modified & developed content; conducted all instruction, grading and section management.

Groundwater Geology (GLY 4930/5827) – Teaching Assistant for 3 credit course (2010). Majors + graduate course covering the concepts of groundwater flow and subsurface geology with practice applying concepts and problem solving. Assisted with grading, office hours, and lab instruction.

Hydrogeology and Human Affairs (GLY 3882) – Teaching Assistant for 3 credit course (2010). Majors course addressing insights into current scientific, political, legal, social, and economic aspects of hydrogeology. Assisted with grading, office hours and lab instruction; guest lectured.

Water, Environment and Society (EES 4932) – Co-Instructor for 3 credit course (2008). Honors, special topics course exploring local global issues of water shortage, pollution and conflict from an interdisciplinary perspective. Co-developed the course; assisted with lecturing, grading and course evaluation.

PROFESSIONAL ACTIVITIES

Professional Service

Reviewer: *Aquatic Sciences*, *Biogeochemistry*, *JGR-Biogeosciences*, *Journal of Hydrology*, *Limnologica*, *Water Resources Research* (since 2016)

Proposal Reviewer: Dept. of Energy Subsurface Biogeochemical Research Program (2019-2020)

AGU Annual Meeting Convener (2016, 2018), Chair (2016-2020) & OSPA Liaison (2018) for the "Groundwater – Surface Water Interactions" series of sessions.

AGU Annual Meeting Convener for "Coupled Dynamics of Physical, Biological, Geomorphic, Hydrologic, and Chemical Processes in the Hyporheic Zone over a Range of Spatial and Temporal Scales" sessions (2018).

Member of: American Geophysical Union (AGU), Earth Science Women's Network (ESWN), Society of Env. Toxicology and Chemistry (SETAC)

Institutional Service

Panelist & Presenter at numerous museum outreach & donor events, Academy of Natural Sciences (since 2016).

Member, GEO Curriculum Committee, BEES Dept., Drexel University (since 2016)

Faculty Committee Graduate Student Representative, Hydrologic Sciences Academic Cluster, Univ. of Florida (2011-2012)

Department Representative, Graduate Student Council, Univ. of Florida (2007-2010)

Other Service

Member, Watershed Committee to the Board of Trustees, Willistown Conservation Trust (since 2019)

Professional & Stakeholder Workshops

Watershed Congress, Delaware Riverkeeper Network, Presenter (2019)

Early Career Geoscience Faculty Workshop, On the Cutting Edge (2018)

Delaware Estuary Science & Environmental Summit, Partnership for the Delaware Estuary, Presenter (2017)

Delaware River Watershed Forum, Coalition for the Delaware River Watershed (2016, 2018)

Berkeley Catchment Science Symposium, Berkeley Water Center (2014 – 2015, 2019)

International Workshop on Temporal High Resolution Water Quality Monitoring and Analysis, Helmholtz-UFZ (2014)

NSF Research Day, I-Cubed Program, Univ. of Florida (2011 – 2012)

Preparing for an Academic Career in the Geosciences Workshop, On the Cutting Edge (2012)

Florida Springs Science Symposium, North Florida Springs Alliance (2012)

Ichetucknee Preservation Research Workshop, Three Rivers Trust Inc. (2010)

OUTREACH

Presented research & Section activities at various Academy public & member events incl. *Member's Night*, *Back from the Field*, & *Toast to the Collections* (since 2016).

Panelist for the Academy's *Academy Conversation* series of informal discussions on the latest science news that affects our everyday lives, incl. topics on PFAS, Clean Water Act & COVID-19 (since 2019).

Instructor at the *Drexel Environmental Science Leadership Academy* (*GeoDELSA*) introducing 15+ rising high school juniors and seniors to earth science at Bighorn Basin and Yellowstone (since 2018).

FIRST LEGO League Challenge student robotics challenge, U. Pennsylvania Engineering: Spoke to ~150 middle school students (ages 9-16) about water and stream research (2017).

'Can You Dig It?' outreach event, Florida Museum of Natural History & UF Dept. Geological Sciences: Designed & presented an interactive exhibit on 'Florida's Groundwater'; participation >1500 (2008-2013).

Santa Fe College, Gainesville, FL: Guest lectured for 3 sections of the Physical Geology Lab on Florida's springs (2011-2012).

UF Geosciences Day campus outreach event, UF Dept. Geological Sciences: Proposed, designed & organized 1st and 2nd events. Participation >400 (2011, 2x).

Westwood Middle School, Gainesville, FL: Taught interactive lecture about Florida's groundwater to eight 6th Grade science classes (2010).

3rd Annual Florida Springs Celebration, Oleno State Park, FL: Exhibited a Florida's Groundwater display (2010).