

Pamela Lee Sullivan

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ACADEMIC AND PROFESSIONAL EMPLOYMENT

- Assistant Professor**, Department of Geography and Atmospheric Science, University of Kansas (KU) 2014-Pres.
- Postdoctoral Scholar**, Susquehanna Shale Hills Critical Zone Observatory (SSH-CZO), Earth and Environmental Systems Institute (EESI), Departments of Geosciences and Civil and Environmental Engineering, Pennsylvania State University (PSU) 2012-2014
- Postdoctoral Scholar**, Florida Coastal Everglades Long Term Ecologic Research Program (FCE-LTER), Southeastern Environmental Research Center (SERC), Department of Biology, Florida International University (FIU) 2012

PROFESSIONAL INTERESTS

Hydrogeology, Ecohydrology, Biogeochemistry, Catchment Hydrology, Landscape and Wetland Ecology, Aqueous Geochemistry, Stable Isotope Geochemistry

EDUCATION

- Ph.D. Geosciences**, Department of Earth and Environment, Florida International University; Miami, FL. *Dissertation*: Groundwater-Surface Water Interactions on Tree Islands in the Everglades, South Florida. *Advisor*: Dr. René M. Price 2011
- B.S.c. Natural Resource Conservation**, Faculty of Forestry, University of British Columbia; Vancouver, Canada 2005

PEER REVIEWED PUBLICATIONS (26)

26. Herndon EM, Steinhofel G, Dere AL, **Sullivan PL**. 2018. Perennial flow through convergent hillslopes explains chemodynamic solute behavior in a shale headwater catchment. *Chemical Geology*. (In Review)
25. Stinchcomb GE, Kim H, Hasenmuller E, **Sullivan PL**, Sak PB, Brantley SK. 2018. Relating soil gas to weathering using rock and regolith geochemistry. *American Journal of Science*. (In Review)
24. **Sullivan PL**, Goddérís Y, Shi Y, Schott J, Duffy CJ, Brantley SL. 2018. Earthcasting reveals weathering fluxes increase with warming temperatures but decrease with nutrient cycling. *JGR Earth's Surface*. (In Review)
23. Baatz R, **Sullivan PL**, Li L, Weintraub S, Loescher H, Mertl M, Groffman PM, Wall DH, Young M, White T, Wen H, Zacharias S, Kuhn I, Tang J, Gaillardet J, Braud I, Flores A, Kumar P, Lin H, Ghezzehei T, Gholz HL, Vareeken H, Van Looy K. 2018. Integration of terrestrial observational networks: opportunity for advancing Earth system dynamics modelling. *Earth System Dynamics*. (In Revision)
22. Billings S, Hirmas D, **Sullivan PL**, et al. 2018. Loss of deep roots limits biogenic agents of soil development only partially restored by 80 y of forest regeneration. *Elementa*. (In Revision)
21. Vero SE, Macpherson GL, **Sullivan PL**, Brookfield AE, Nippert JB, Kirk MF, Datta S, Kempton P. 2017. Developing a Conceptual Framework of Landscape and Hydrology on Tallgrass Prairie: A Critical Zone Approach. *Vadose Zone Journal*.

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20. Wymore AS, West NR, Maher K, **Sullivan PL**, Harpold A, Karwan D, Marshall JA, Perdrial J, Rempe D, Ma L. 2017. Growing New Generations of International Critical Zone Scientists. *Earth and Planetary Science Letters*.

19. Li L, Bao C, **Sullivan PL**, Brantley SL, Shi Y, Duffy C. 2017. Understanding Watershed Hydrogeochemistry: 2. Synchronized Hydrological and Geochemical Processes Drive Chemostatic Behavior. *Water Resources Research*.

18. Li L, Maher K, Navarre-Sitchler A, Druhan J, Lawrence C, Meile C, Moore J, Perdrial J, **Sullivan PL**, Thompson A, Jin L, Bolton E, Brantley S, Dietrich W, Mayer U, Steefel CI, Valocchi A, Zachara J, Kocar B, Mcintosh J, Tutolo BM, Beisman J, Kumar M, Sonnet E. 2017. Expanding the Role of Reactive Transport Models in Critical Zone Processes. *Earth-Science Reviews*. DOI: 10.1016/j.earscirev.2016.09.001

17. Brantley SL, Lebedeva M, Balashov V, Singha K, **Sullivan PL**, Stinchcomb G. 2017. Toward a conceptual model relating chemical reaction fronts to water flow paths in hills. *Geomorphology*. DOI: 10.1016/j.geomorph.2016.09.027

16. **Sullivan PL**, Hynek S, Singha K, White T, Gu X, Clarke B, Duffy CJ, Brantley SL. 2016. Oxidative dissolution under the channel leads geomorphological evolution at the Shale Hills Catchment. *American Journal of Science*

15. **Sullivan PL**, Steinhoefel G, Ma L, Jin L, Noireaux J, West N, Hynek S, Gaines K, Eissenstat D, Gaillardet J, Derry LA, Meek K, Sparks J, Karwan DL, Yesavage T, Fantle MS, Brantley SL. 2016. CZ-tope at Susquehanna Shale Hills CZO: Testing multiple isotope proxies to elucidate Critical Zone processes. *Chemical Geology*. DOI: 10.1016/j.chemgeo.2016.05.012

14. **Sullivan PL**, Price RM, Ross MS, Sah J, Scinto LJ, Cline E, Drechel TW, Sklar FH. 2016. Trees: A powerful geomorphic agent governing the landscape evolution of a subtropical wetland. *Biogeochemistry* DOI: 10.1007/s10533-016-0213-9.

13. Herndon E, Dere A, **Sullivan PL**, Norris D, Reynolds B, Brantley SL. 2015. Landscape heterogeneity drives contrasting concentration-discharge relationships in shale headwater catchments. *Hydrology and Earth System Science*. DOI:10.5194/hess-19-3333-2015

12. Noireaux J, Gaillardet J, **Sullivan PL**, Brantley SL. 2014. Boron isotope fractionation in soils at Shale Hills CZO. *Procedia Earth and Planetary Sciences*. DOI: 10.1016/j.proeps.2014.08.024

11. Duffy C, Shi Y, Davis K, Slingerland R, Li L, **Sullivan PL**, Godd ris Y, Brantley SL. 2014. Designing a Suite of Models to Explore Critical Zone Function. *Procedia Earth and Planetary Sciences*. DOI: 10.1016/j.proeps.2014.08.003

10. Jin L, Ogrinc N, Yesavage T, Hasenmueller E, Ma L, **Sullivan PL**, Kaye J, Duffy C, Brantley SL. 2013. The CO₂ consumption potential of gray shale weathering: insights from the evolution of carbon isotopes in the Susquehanna Shale Hills Critical Zone Observatory. *Geochimica et Cosmochimica Acta*. DOI:10.1016/j.gca.2014.07.006

9. **Sullivan PL**, Gaiser EE, Surratt D, Rudnick D, Davis S, Sklar F. 2014. Wetland Ecosystem Response to Hydrologic Restoration and Management: The Everglades and its Urban-Agricultural Boundary (FL, USA). *Wetlands*. DOI: 10.1007/s13157-014-0525-2

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8. Thomas E, Duffy CJ, Lin HS, **Sullivan PL**, Holmes G, Brantley SL, Jin L. 2013. Spatiotemporal patterns of water stable isotope compositions at the Shale Hills Critical Zone Observatory: Linkages to subsurface hydrologic processes. Vadose Zone. DOI: 0.2136/vzj2013.01.0029
7. **Sullivan PL**, Schedlbauer JL, Saha A, Price RM. 2013. The influence of hydrologic restoration on groundwater-surface water interactions in a karst wetland, Everglades (FL, USA). Wetlands. DOI: 10.1007/s13157-013-0451-8
6. **Sullivan PL**, Engel V, Ross MS, Price RM. 2013. The influence of vegetation on the hydrodynamics and geomorphology of a tree island in Everglades National Park (FL, USA). Ecohydrology. DOI: 10.1002/eco.1394
5. Gaiser EE, **Sullivan PL**, Tobias FAC, Trexler JC. 2013. Boundary effects on benthic microbial phosphorus concentrations and diatom beta diversity in a hydrologically-modified, nutrient-limited wetland. Wetlands. DOI: 10.1007/s13157-013-0379-z
4. **Sullivan PL**, Price RM, Miralles-Wilhelm F, Ross MS, Scinto LJ, Cline E, Drechel TW, Sklar FH. 2012. The role of recharge and evapotranspiration as hydraulic drivers of ion concentrations in shallow groundwater on Everglades tree islands, FL. Hydrological Processes. DOI: 10.1002/hyp.9575
3. Wetzel PR, Sklar FH, Coronado CA, Troxler TG, Krupa SL, **Sullivan PL**, Ewe S, Price RM, Newman S, Orem WH. 2011. Biogeochemical processes on tree islands in the greater Everglades: Initiating a new paradigm. Critical Reviews in Environmental Science and Technology 41, 670 — 701. DOI: 10.1080/10643389.2010.530908
2. **Sullivan PL**, Price RM, Ross MS, Scinto LJ, Stoffella SL, Cline E, Drechel TW, Sklar FH. 2011. Hydrologic processes of tree islands in the Everglades: Tracking the effects of tree establishment and growth. Hydrogeology Journal 19, 367-378. DOI: 10.1007/s10040-010-0691-0
1. Stoffella SL, Ross MS, Sah JP, Price RM, **Sullivan PL**, Cline EA, Scinto LJ. 2010. Survival and growth responses of eight Everglades tree species along experimental hydrology gradient on tree island types. Applied Vegetation Science 13, 439-449. DOI: 10.1111/j.1654-109X.2010.01081.x

OTHER MAJOR PUBLICAITONS (1)

Sullivan PL, Wymore AS, McDowell WH, et al. (2017). New Opportunities for Critical Zone Science. CZO Arlington Meeting White Booklet. <http://criticalzone.org/national/events/event/2017-06-04-2017-arlington-meeting-for-critical-zone-science/>

GRANTS (6)

Bowmen-James K (PI), **Sullivan PL** (Cooperating Investigator). RII *Track-1: Microbiomes of aquatic, plant, and soil systems mediating sustainability*. National Science Foundation Approximately **\$745,000** of \$20,000,000 grant awarded to multiple investigators at four institutions (KU, KSU, FHSU, WSU). Submitted August 12, 2016.

Peltier E (PI), **Sullivan PL** (Co-PI), Young B (Co-PI). *Assessing the Water Quality Impacts of Constructed Wetlands on Tile Outlet Runoff*. KS Water Environmental Protection, Kansas Water Office **\$248,767**, 2017 - 2019

Sullivan PL (PI), Peltier E (Co-PI), *Assessing the impact of constructed wetlands on nitrogen transformation and release from tile drain croplands in Kansas*. KS Water Resources Institute **\$30,000**, 2016 - 2017

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Sullivan PL (PI), Gaiser EE (Co-PI). *Wetlands Special Issue “Wetland Ecosystem Response to Hydrologic Restoration and Management: The Everglades and its Urban Boundary (FL, USA)”*. Everglades National Park (ENP), Florida Coastal Everglades Long Term Ecological Research (FCE-LTER), South Florida Water Management District (SFWMD), Southeastern Environmental Research Center (SERC) and the Everglades Foundation. **\$15,000**, 2012-2013

Jaffe R (PI), Gaiser EE (Co-PI), **Sullivan PL** (Recipient). *“Integrating datasets to examine water quality trends along the Eastern Boundary of Everglades National Park”*. Everglades National Park. **\$60,000**, 2009-2012

Price RM (PI), **Sullivan PL** (Co-PI). *“Identifying the connection between groundwater nutrients and stable isotopes in the ridge-slough-and-tree island community at Loxahatchee Impound Landscape Assessment (LILA)”*. South Florida Water Management District. **\$30,387**, 2008-2009

Price RM (PI), **Sullivan PL** (Co-PI). *“A physical investigation of groundwater-surface water interactions at LILA”*. South Florida Water Management District. **\$49,944**, 2007-2009

KU GRANTS (2)

Sullivan PL (PI). *Vegetation: a catalyst and inhibitor of chemical weathering but when?* \$8,000, Submitted August 2016 (October 2016 - October 2018).

Sullivan PL (PI), Hirmas D (Co-PI), Macpherson G (Co-PI), Billing, S (Co-PI). *Major Project Planning Grant (MPPG) for Leveraging a karst CZO end member on the spectrum of system reactivity as an exemplar of Earth's CZ trajectories*. Institutional - MPPG **\$32,966** (May 1, 2017 - March 30, 2018).

PROPOSALS UNDER REVIEW (2)

Hirmas D (PI), **Sullivan P** (Co-PI), Brunsell N (Co-PI), Burgin A (Co-PI), & Kettle, D. (Co-PI). *Instrumentation Array to Enhance the Capacity for Collaborative Research and Teaching at the University of Kansas Field Station*. National Science Foundation \$736,788, Submitted December 9, 2016 (September 1, 2017 - August 31, 2020).

Sullivan PL (PI), Williamson T (Co-PI), Hirmas, D (Co-PI), Flores A (Co-PI). *“How do interactions between precipitation and soil hydraulic properties alter the water cycle?”*. US Geological Survey \$160,162, Submitted January 31, 2017 (October 1, 2018 - September 30, 2020).

HONORS AND AWARDS

Outstanding Academic Achievement in Geosciences (Ph.D.), College of Arts and Sciences FIU	2012
Student Travel Grant, FCE-LTER, \$500	2011
Dissertation Year Fellowship, \$25,000	2011
Best Student Poster Award, FCE-LTER All Scientists Meeting, \$150	2011
Best Student Poster Award, FCE-LTER All Scientists Meeting, \$150	2010
Everglades Foundation Fellowship, \$17,000	2008
SERC-Christina Menedez Fellowship, \$5,000	2008

PRESENTATIONS

Invited Presentations (18)

Earth-System Observing Network (EON-ROSE) and Canadian Cordillera Array (CCArray) Symposium, Ottawa CA. *Critical Zone Science: Building Future Observatories* 2018

American Geophysical Union (AGU) Annual Meeting, New Orleans. *New Opportunities for Critical Zone Science*. 2017

Geologic Society of America (GSA), Seattle, WA. *Unraveling how landscape heterogeneity alters concentration discharge behavior in carbonate headwater streams*. 2017

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- American Chemical Society (ACS) symposium in honor of Susan Brantley. *Earthcasting solute fluxes and soil development in the critical zone.* 2017
- International CZO Workshop. *KONZA Prairie: Elucidating the impact of land cover and climate change on the evolution of the karst Critical Zone.* 2015
- Geology Seminar Series K-State, Kansas State University. *Developing approaches to hindcast and earthcast climate controls on solute fluxes during shale weathering in the Critical Zone.* 2015
- Van Tuyl lecture, Colorado School of Mines. *Hydrogeochemical and geomorphological evolution of tree islands in the Everglades* 2015
- CZO Concentration Discharge Behavior Workshop. *Evaluating the impact of land cover and climate change on C-Q behavior at the Konza Prairie, KS.* 2015
- Greater Everglades Ecosystem Restoration Conference, Coral Springs, FL. *Hydrogeochemical response of experimental Everglades Tree islands (Fl, USA): Identifying feedback mechanisms associated with early tree growth and differing geological materials.* 2015
- Geology Department Colloquium, Saint Lewis University. *The interplay of regolith evolution and watershed hydrodynamics at Susquehanna Shale Hills CZO.* 2014
- Kansas Geologic Survey, Lawrence KS. *Ecohydrologic Controls on Landscape Patterns and Solute Fluxes.* 2014
- Institut de Physique du Globe de Paris Seminar, Paris. *Stable Isotope Hydrology: Informing our understanding of near surface weathering processes in the Critical Zone* 2013
- LTERR-All Scientist Meeting (ASM), Estes Park, CO. *Stable isotope infrared (laser) spectrometry: water isotopes* 2012
- Everglades Foundation Fellows First Symposium, FIU. *Groundwater-surface water interactions on Satinleaf Tree Islands, Everglades National Park, South FL.* 2010
- Loxahatchee National Wildlife Refuge. *A physical investigation of groundwater-surface water interactions on tree islands at LILA.* 2009
- SFWMD, Palm Beach. *A geochemical investigation of groundwater-surface water interactions at LILA.* 2008
- Papers Presented at Conferences (48)***
- Stops MW, **Sullivan PL**, Peltier E. Tracking the Hydrologic and Biogeochemical Response of Tile Outlet Terrace Agriculture Fields to Storm Events. Governors Water Conference. 2017
- Billings SA, Richter Dd, Hirmas D, Lehmeier C, Bagchi S, Brecheisen Z, **Sullivan PL**, Min K, Hauser E, Stair R, Flournoy R. Soil weathering agents are limited where deep tree roots are removed, even after decades of forest regeneration. American Geophysical Union (AGU) Fall Meeting, New Orleans. 2017
- Herndon E, Steinhofel G, Dere AL, **Sullivan PL**. Perennial flow through convergent hillslopes explains chemodynamic solute behavior in a shale headwater catchment. AGU Fall Meeting 2017
- Wymore A, Kaushal S, McDowell WH, Kortelainen P, Bernhardt ES, Dodds WK, Johnson S, Brookshire J, Spencer R, Rodrigues-Cardona ., Argerich A, Haq S, **Sullivan PL**, Lopez-Loreda C, Coble AA, Daley M. Carbon and nitrogen stoichiometry across stream ecosystems. (AGU) Fall Meeting. 2017

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- Sullivan PL**, Li L, Macpherson GL, Stops MW, Dodds W. Do Deeper Roots Enhance Weathering at Depth in Woody-Encroached Grasslands? Goldschmidt, Paris. 2017
- Okeson M, **Sullivan PL**. Elucidating the control hillslope hydrologic connectivity and chemical weathering on the development in shrink-swell soils. AGU/SEG Hydrogeophysics Workshop, Stanford. 2017
- Brantley SL, Gu X, **Sullivan PL**, Kim H, Stinchcomb GE, Lebedeva M, Balashov VN. Exploring nested reaction fronts to understand how oxygen cracks rocks, carbonic and sulfuric acids dissolve rocks, and water transports rocks during weathering. AGU Annual Meeting, San Francisco. 2016
- Duffy C, Thomas E, Bhatt G, Holmes G, Boyer E, **Sullivan PL**. Using isotopic age of water as a constraint on model identification at the Critical Zone Observatory. AGU annual meeting, San Francisco. 2016
- Li L, Bao C, **Sullivan PL**, Brantley SL, Shi Y, Duffy C. Hydrogeochemical synchrony drives chemostatic behaviour in stream chemistry. AGU Annual Meeting, San Francisco. 2016
- Macpherson GL, **Sullivan PL**, Johnson WC. Chemical weathering model of stream water chemistry in a merokarst region does not require limestone dissolution, Konza Prairie LTER site, Northeastern Kansas. GSA Annual Meeting, Denver. 2016
- Stops MW, **Sullivan PL**, Macpherson GL, Hirmas D, Dodds WK. Elucidating the impact of land cover and climate change on concentration-discharge relationships in Epikarst Watersheds. GSA Annual Meeting, Denver. 2016
- Sullivan PL**, Hyneck S, Gu X, Brantley SL. Pyrite dissolution leads watershed geomorphological evolution. GSA Annual Meeting, Denver. 2016
- Vero SE, Datta S, Kirk M, Macpherson GL, **Sullivan PL**, Kluitenberg GJ. How does burning affect soil structure and vadose hydrology of tallgrass prairies? GSA Annual Meeting, Denver. 2016
- Vero S, Macpherson GL, **Sullivan PL**, Brookfield AE, Kirk MF, Datta S, Kempton PD. The Konza Prairie, Northeast Kansas, USA: The hydrologic evolution of a merokarst landscape. AGU annual meeting, San Francisco. 2016
- Bao C, Li L, Shi Y, **Sullivan PL**, Duffy C, Brantley SL. Development of RT-Flux-PIHM: Understanding hydrogeochemical processes at the watershed scale. Computational Methods in Water Resources (CMWR) 2016
- Hirmas D, Steffens M, **Sullivan PL**, Zhang C, Giménez D. Coupling multistriple laser triangulation with hyperspectral imaging VisNIR spectroscopy to elucidate the feedbacks between soil structure, hydrology, and organic matter. EGU, Vienna. 2016
- Bao C, Li L, Shi Y, **Sullivan PL**, Duffy C, Brantley SL. Understanding the Concentration-Discharge Relationship of Chloride and Magnesium in Shale Hills Using RT-Flux-PIHM. American Geophysical Union (AGU) Fall Meeting. 2015
- Brantley SL, **Sullivan PL**. Understanding How Nested Reaction Fronts under Watersheds Impact Flow, Transport, and Geomorphological Evolution: the Shale Hills Example. American Geophysical Union (AGU) Fall Meeting. 2015
- Noireaux J, Gaillardet J, Louvat P, **Sullivan PL**, Steinhoefel G, Brantley SL. Boron isotopes at the Shale Hills Critical Zone Observatory. American Geophysical Union Fall Meeting. 2015

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- Sullivan PL**, Brantley SL. Using WITCH to determine the factors that govern shale weathering and solute fluxes in the Critical Zone. American Geophysical Union (AGU) Fall Meeting. 2015
- Sullivan P L**, Hynek S, Singha K, White T, Gu X, Duffy CJ, Brantley SL. The Interplay of Regolith Evolution and Watershed Hydrodynamics on Shale Weathering Fluxes. Goldschmidt Prague 2015
- Sullivan PL**, Godd ris Y, Shi Y, Gu X, Schott J, Duffy C, Brantley SL. Using WITCH to determine the factors that govern shale weathering and solute fluxes in the Critical Zone. Gordon Research Conference for Catchment Science. 2015
- Sullivan P L**, Hynek S, Singha K, White T, Gu X, Duffy CJ, Brantley SL. The Interplay of Regolith Evolution and Watershed Hydrodynamics on Shale Weathering Fluxes. American Geophysical Union (AGU) Fall Meeting; San Francisco, California. 2015
- Stienhoefel G, **Sullivan PL**, Noireaux J, West N, Hynek S, Gaillardet J, Jin L, Ma L, Derry LA, Meek K, Karwan DL, Yesavage T, Fantle MS, Brantley SL CZ-Topo: A multiple isotope approach to quantify Critical Zone processes – the Susquehanna Shale Hills Critical Zone Observatory as an example. Critical Zone Observatory All Hands Meeting, Yosemite Park CA. (September 22). 2014
- Sullivan PL**, Hynek S, Singha K, White T, Gu X, Russo T, Kim H, Duffy C, Clarke B, Brantley SL. The interplay of regolith evolution and watershed hydrodynamics at Susquehanna Shale Hills CZO. Critical Zone All Hands Meeting, Yosemite Park CA. (September 22) 2014
- Stinchcomb G, **Sullivan PL**, Hasenmuller E, Sak P, Brantley SL. Quantitative links between biota, mass-balance geochemistry, and the soil atmosphere in the Piedmont Uplands Critical Zone, USA. Goldschmidt 2014
- Sullivan PL**, Godd ris Y, Shi Y, Singha K, Clarke B, Schott J, Duffy CJ, Brantley SL. Shale to regolith evolution: the controls on catchment solute fluxes. European Geophysical Union (EGU) Assembly. 2014
- Sullivan PL**, Godd ris Y, Shi Y, Schott J, Duffy CJ, Brantley SL. Quantifying climate controls on shale weathering in the Critical Zone. Geological Society of America (GSA) Northeastern Section 49th Annual Meeting 23–25 March 2014 2014
- Brantley SL, Lin H, **Sullivan PL**, Gu X, Hasenmuller EA, Kaye JP. Exploring how rock turns to regolith at the Susquehanna Shale Hills Critical Zone Observatory. Geological Society of America (GSA) Northeastern Section 49th Annual Meeting 23–25 March 2014 2014
- Sullivan PL**, Godd ris Y, Shi Y, Schott J, Duffy CJ, Brantley SL. Developing approaches to hindcast and earthcast climate controls on solute fluxes during shale weathering in the Critical Zone. American Geophysical Union (AGU) Fall Meeting; San Francisco, California. 2013
- Noireaux J, **Sullivan PL**, Louvat P, Gaillardet J, Brantley SL. Boron isotopes at the Shale Hills Critical Zone Observatory. AGU Fall Meeting; San Francisco, California. 2013
- Bao C, Li L, Shi Y, Qiao C, **Sullivan PL**, Brantley SL, Duffy CJ. Understanding the hydrological controls on the water chemistry at the watershed scale using an integrated hydro-thermo-geochemical model PIHM-RT. AGU Fall Meeting; San Francisco, California. 2013
- Singha K, Clarke B, **Sullivan PL**, Chattopadhyay PB, Brantley SL. Geologic controls on fracture distributions within the Shale Hills Critical Zone Observatory. AGU Fall Meeting; San Francisco, California. 2013

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- Hynek S, Orlando J, **Sullivan PL**, Brantley SL, McDowell B. The architecture of weathering at two CZOs: Groundwater, regolith, and solutes at Susquehanna Shale Hills and Luquillo Experimental Forest. Geologic Society of America (GSA), Annual Meeting; Denver, CO. 2013
- Sullivan PL**, Godd ris Y, Shi Y, Schott J, Duffy CJ, Brantley SL. Using WITCH to quantify landscape and hydrologic controls on solute fluxes in the Critical Zone (Susquehanna Shale Hills Observatory, PA) Goldschmidt 2013; Florence, Italy 2013
- Sullivan PL**, Engel V, Ross MS, Price. Transpiration as a hydrologic driver of ion and mineral accumulation on tree islands. 9th INTECOL International Wetlands Conference; Orlando, FL 2013
- Price RM, **Sullivan PL***, Ross MS, Scinto LJ, Cline E, Dreschel TW, Sklar FH. The role of groundwater-surface water interactions in Everglades landscape restoration (South Florida, USA). Greater Everglades Ecosystem Restoration (GEER); Orlando, FL. 2012
- Saha A, **Sullivan PL**, Lagomasino D, Villalobos-Vega R, Price PM. Evapotranspiration in a large forested wetland: a comparison of estimation methods). GEER; Orlando, FL. 2012
- Sullivan PL**, Price RM, Engel V. The influence of vegetation and geomorphology on the hydrodynamics of Satinleaf tree island, Everglades National Park. FCE-LTER All Scientists Meeting; North Miami, FL. 2012
- Sullivan PL**, Price RM, Miralles-Wihlem FR, Ross RS, Scintot LJ, Cline E, Dreschel TW, Sklar FH. Precipitation and groundwater evapotranspiration as hydraulic drivers of nutrient and ion accumulation in Everglades tree islands, FL. AGU Fall Meeting; San Francisco, California. 2011
- Price RM, **Sullivan PL**, Zapata X. The effects of hydro-biogeochemical processes on groundwater chemistry including nutrient concentrations in an oligotrophic wetland: Examples from the FL Everglades. AGU, Meeting of the Americas; Foz do Iguasso, Brazil 2010
- Sullivan PL**, Price RM. Hydrodynamics of recently planted tree island: Implications for shallow groundwater nutrient and ion concentrations. GEER; Naples, FL. 2010
- Sullivan PL**, Price RM. Groundwater-surface water interactions on Satinleaf tree island, Everglades National Park. FCE-LTER ASM; North Miami, FL. 2010
- Sullivan PL**, Price RM. Geochemical investigation of groundwater-surface water interactions on Satinleaf tree island, Everglades National Park. FCE-LTER All Scientists Meeting, Coral Gables, FL, March 19-20th. 2010
- Sullivan PL**, Price RM. Seasonal variations in tree island hydrology at LILA. GEER; Naples, FL. 2009
- Sullivan PL**, Price RM. Seasonally driven groundwater recharge by Everglades surface water as indicated by temperature. AGU, Joint Assembly; Fort Lauderdale, FL. 2008
- Sullivan PL**, Price RM, Scinto L, Ross M, Dreschel T, Sklar F, Cline E. Groundwater-surface water interactions in tree islands at LILA. American Society of Limnology and Oceanography, Annual Meeting; Orlando, FL. 2008
- Sullivan PL**, Price RM. Using temperature and groundwater levels to identify groundwater-surface water interactions in peat tree islands. GSA, Annual Meeting; Denver, CO. 2007

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COURSES TAUGHT

GEOG 104 Introduction to Physical Geography
GEOG 339 Introduction to Environmental Hydrology/Water Resources
GEOG 540 Ecohydrology
GEOG 538 Soil Chemistry
GeoSci413w Techniques in Geochemistry (PSU)

UNDERGRADUATES SUPERVISED (7)

Joseph Prickett (KU), Sydney Simpson (KU), Yane Tan (KU), Marvin Stops (KU), Molly Cain (PSU), Brianna McClure (PSU), Jessica Fisher (PSU), Tatiana Marquez (FIU), Nicole Neira (FIU), Raechel Michaelis (FIU)

GRADUATES SUPERVISED (6)

Morgon Okenson (KU), Marivn Wes Stops (KU), Ryan Jones (PSU), Evan Thomas (PSU), Ashlee Dere (PSU), Estefania Sandoval (FIU)

PROFESSIONAL AFFILIATIONS

European Geologic Society
Geological Society of America
American Geophysical Union
American Chemical Society

PROFESSION SERVICE

- Editor, Associate, *Wetlands* 2014-2018
- Water Rock Interaction Early Career Committee, WRI-16 meeting, Tomsk, Russia 2016-2019
- Guest Editor, *Carbonate Weathering and Evolution of the Karst Critical Zone*, Special Issue: Chemical Geology 2016-2018
- Workshop Chair: *Using Observation Networks to Advance Earth System Understanding: State of the Art, Data-Model Integration, and Frontiers*. Boulder, CO USA (February 2018), 2018
- Meeting Chair: *Critical Zone Observatory Arlington All Hands Meeting*
- Co-Chair, *Carbonate Weathering Impacts on Critical Zone Evolution: Rapid Transformations of Structure and Function on Decade to Millennial Timescales*. Goldschmidt, Paris. 2017
- Co-Chair, *Tracking Earth Surface Processes: Isotope Tracing of Particulate and Dissolved Fluxes*. Goldschmidt, Paris. 2017
- Co-Chair, *Karst critical zone evolution: The rapid responses of carbonate systems to changes in climate, sea level, groundwater pumping, and land cover/land-use*, Geological Society of America, Annual Meeting. 2016
- Co-Chair, *Advancing Ecohydrology with Geophysics Special Session*, American Geophysical Union (AGU) Fall Meeting 2016
- Co-chair, *Ecological and Hydrological Resistance and Resilience: Emerging Understanding from Interactions at Multiple Scales?* American Geophysical Union (AGU) Fall Meeting, San Francisco, CA. 2015
- Co-chair, *Modeling the Critical Zone: Integrating Processes and Data across Disciplines and Scales*, American Geophysical Union (AGU) Fall Meeting, San Francisco, CA. 2015
- Co-chair, *Multiple Isotopic Proxies for Weathering Processes and Mechanisms in the Critical Zone*, Goldschmidt, Prague, CZ. 2015
- Co-chair, *CZ-tope: Multiple isotopes to understand watersheds*. American Geophysical Union (AGU) Fall Meeting, San Francisco, CA. 2013
- Guest Editor for *Wetlands Special Issue, Wetland Ecosystem Response to Hydrologic Restoration and Management: The Everglades and its Urban Boundary (FL, USA)*. 2012
- Co-chair of Special Session, *Self-Organized Landscapes*. 9th International Wetlands Conference (INTECOL), Orlando, FL. 2012

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Journal Reviewer: Agricultural and Forest Meteorology, Biogeoscience, Earth and Planetary Science Letters, Restoration Ecology, Water Resources Research, Groundwater, Ecohydrology, Ecological Complexity, Chemical Geology

Proposal Reviewer and Panelist: National Science Foundation

DEPARTMENTAL AND UNIVERSITY SERVICE

- Undergraduate Affairs, Member.
- G&AS Faculty Affairs Committee, Member
- Atmospheric Science Search Committee, Member
- Faculty judge at the Graduate Research Competition, Reviewer.
- Spring 2015 Undergraduate Research Award (UGRA) competition, Reviewer.