Zhi Li, Ph.D.

Postdoctoral Research Associate at Pacific Northwest National Laboratory
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RESEARCH INTERESTS

Computational Hydrology & Hydraulics, Watershed Hydrology, Disturbance Hydrology, Solute Transport, Reactive Transport, Environmental Fluid Mechanics, Turbulence in Open-Channel Flows, Sediment Transport, River Dynamics, Fluvial Geomorphology, Computational Fluid Dynamics, High-Performance Computing

EDUCATION

Ph.D. in Water Resources Engineering & Science, University of Illinois Urbana-Champaign 2022
- *Thesis: Numerical Modeling Study on Meandering and Cutoff Dynamics* [link]

M.S. in Environmental Engineering, Michigan State University 2014

B.S. in Geology, Nanjing University 2012

RESEARCH EXPERIENCE

Pacific Northwest National Laboratory Mar. 2022 - Present
Postdoctoral Research Associate

Ven Te Chow Hydrosystems Laboratory, University of Illinois Urbana-Champaign 2016 - Feb. 2022
Graduate Research Assistant

Environmental Fluid Mechanics Laboratory, University of Pittsburgh 2014 - 2016
Graduate Research Assistant

Groundwater Modeling Laboratory, Michigan State University 2012 - 2014
Graduate Research Assistant

MOE Key Laboratory of Surficial Geochemistry, Nanjing University 2010 - 2012
Undergraduate Research Assistant

TEACHING AND MENTORING EXPERIENCE

Undergraduate Student Research Mentor, University of Illinois 2020 - 2021
- Through the Promoting Undergraduate Research in Engineering program and the Undergraduate Research Apprenticeship Program (URAP) (earned the Graduate College Mentoring Certificate)

Teaching Assistant, University of Pittsburgh 2015 - 2016
- CEE 2416 Sediment Transport (graduate-level)

PUBLICATIONS

PEER-REVIEWED/REVIEWING JOURNAL ARTICLES (* corresponding author)

9. [**WRR**] **Li, Zhi**; Li, Bing; Jiang, Peishi; Hammond, Glenn E; Shuai, Pin; Zahura, Faria T; Coon, Ethan T; Chen, Xingyuan*. "Evaluating the effects of burn severity and precipitation on post-fire watershed responses using distributed hydrologic models." *Water Resources Research*, 2024. (under review) [preprint]
8. [**WRR**] **Li, Zhi***; Langendoen, Eddy J; Garcia, Marcelo H. "Unveiling the Stochasticity of Bank Erosion: A Hybrid Deterministic and Stochastic Modeling Approach." *Water Resources Research*, 2024 (under review) [preprint] .
7. [**ECOINF**] Zahura, Faria T; Bisht, Gautam; **Li, Zhi**; McKnight, Sarah; Chen, Xingyuan*. "Impact of topography and climate on post-fire vegetation recovery across different burn severity and land cover types through random forest." *Ecological Informatics*, 2024. doi: 10.1016/j.ecoinf.2024.102757

6. [**WRR**] Li, Bing; **Li, Zhi**; Zheng, Jianqiu; Jiang, Peishi; Holmquist, James; Regier, Peter J; Hammond, Glenn E; Ward, Nicholas D; O'Meara, Theresa A; Pennington, Stephanie C; Megonigal, Patrick; Bailey, Vanessa L; Chen, Xingyuan*; Huang, Wei. "Integrated Effects of Site Hydrology and Vegetation on Exchange Fluxes and Carbon Cycling at the Coastal Terrestrial Aquatic Interface." *Water Resources Research*, 2023. doi: 10.1029/2023WR035580

5. [**JHYDROL**] Adebayo, Moses; Bailey, Vanessa; Chen, Xingyuan; Hopple, Anya; Jiang, Peishi; Li, Bing; **Li, Zhi**; Martin-Hayden, James M; Megonigal, Patrick J; Regier, Peter J; Rich, Roy; Stegen, James C; Smith, Rick; Ward, Nicholas D; Woodard, Stella C; Doro, Kennedy O*. "A hydrogeophysical framework to assess infiltration during a simulated ecosystem-scale flooding experiment." *Journal of Hydrology*, 2023. doi: 10.1016/j.jhydrol.2023.130243

4. [**FrontEarthSci**] **Li, Zhi***; Mendoza, Alejandro; Abad, Jorge D; Endreny, Theodore A; Han, Bangshuai;, Carrisoza, Eliseo; Dominguez, Ramon. "High-resolution modeling of meander neck cutoffs: laboratory and field scales." *Frontiers in Earth Science*, 2023. doi: 10.3389/feart.2023.1208782

3. [**CAGEO**] **Li, Zhi*** and Garcia, Marcelo H. "pyRiverBed: A Python framework to generate synthetic riverbed topography of constant-width meandering rivers." *Computers & Geosciences*, 2021. doi: 10.1016/j.cageo.2021.104755

2. [**JGLR**] Wang, Dongchen; **Li, Zhi***; Rojas-Aguirre, Andres F; and Garcia, Marcelo H. "Impact of Lake Michigan water level rise on complex bidirectional flow in the Chicago Area Water System (CAWS)." *Journal of Great Lakes Research*, 2021. doi: 10.1016/j.jglr.2021.10.008

1. [**GEOMORPH**] Rowley, Taylor*; Konsoer, Kory; Langendoen, Eddy J; **Li, Zhi**; Ursic, Michael; Garcia, Marcelo H. "Relationship of point bar morphology to channel curvature and planform evolution." *Geomorphology*, 2020. doi: 10.1016/j.geomorph.2020.107541

CONFERENCE PRESENTATIONS

43. [**AGU'24**] **Li, Zhi**; Huang, Huilin; Xiao, Yi; Li, Bing; Hammond, Glenn E; Chen, Xingyuan. "Integrating ELM-BGC Carbon Cycling with ATS-PFLOTRAN Hydro-Biogeochemical Modeling in a Wildfire-Impacted Pacific Northwest Watershed." *AGU Fall Meeting*, 2024. [link]

42. [**AGU'24**] Chen, Xingyuan; Kumar, Jitendra; **Li, Zhi**; Zahura, Faria Tuz; Niroula, Sundar; Huang, Huilin; Jiang, Peishi; Son, Kyongho; Xiao, Yi; Coon, Ethan; Hoffman, Forrest M; Moulton, David. "Designing Watershed Model Benchmarking and Intercomparison Studies." *AGU Fall Meeting*, 2024. [link]

41. [**AGU'24**] Chen, Chieh-Ying; Pratt, Dannielle; **Li, Zhi**; Li, Bing; Chen, Xingyuan; Michael, Holly A; . "Evaluation of coupled models to simulate the effects of marsh on saltwater intrusion under changing groundwater-surface water environments in coastal critical zone." *AGU Fall Meeting*, 2024. [link]

40. [**AGU'24**] Ogunsola, Olawale ; Megonigal, Patrick ; Bailey, Vanessa L ; Chen, Xingyuan ; Emmanuel, Efemena Destiny ; Li, Bing ; **Li, Zhi** ; Martin-Hayden, James Mark ; Regier, Peter ; Rod, Kenton ; Ward, Nicholas D ; Doro, Kennedy O. "Assessing Changes in Soil Saturation and Salinity along Coastal Interfaces Using Hydrological Observations and Advanced Terrestrial Simulator Model." *AGU Fall Meeting*, 2024. [link]

39. [**AGU'24**] Niroula, Sundar; Chen, Xingyuan; **Li, Zhi**; Fluet-Chouinard, Etienne. "Quantifying Surface and Subsurface Contributions to Streamflow and Inundation Dynamics using Numerical Tracers." *AGU Fall Meeting*, 2024. [link]

38. [**CMWR'24**] **Li, Zhi**; Huang, Huilin; Xiao, Yi; Li, Bing; Hammond, Glenn E; Chen, Xingyuan. "Integrating ELM-BGC Carbon Cycling with ATS-PFLOTRAN Hydro-Biogeochemical Modeling in a Wildfire-Impacted Pacific Northwest Watershed." *The 25th Conference on Computational Methods in Water Resources*, 2024. [link]

37. [**CMWR'24**] Chen, Xingyuan; Zahura, Faria Tuz; Bisht, Gautam; **Li, Zhi**; McDowell, Nate G; Jiang, Peishi; Zhang, Qianyu; Liu, Heping. "Understanding and Representing Watershed Ecohydrological Responses to Wildfires under Changing Climate." *The 25th Conference on Computational Methods in Water Resources*, 2024. [link]

36. [**MODFLOW'24**] Chen, Xingyuan; **Li, Zhi**; Ahmadullah, Tasneem; Jiang, Peishi; Muller, Katherine A; Hammond, Glenn E; Li, Bing; Niroula, Sundar; Song, Hyun-Seob; . "Beyond the flows: modeling carbon cycling from batch to watershed scales." *The 12th MODFLOW-and-More Conference*, 2024. [link]

35. [**ESS-PI'24**] Jiang, Peishi; **Li, Zhi**; Muller, Katherine A; Zheng, Jianqiu; Hammond, Glenn E; Ahmadullah, Tasneem; Song, Hyun-Seob; Garayburu-Caruso, Vanessa A; Kaufman, Matthew Henry; Roebuck, Alan; Fulton, Stephanie G; Stegen, James C; Chen, Xingyuan; Scheibe, Timothy D. "Integrating Organic Matter Measurements into Watershed Hydro-Biogeochemical Models." *Environmental System Science (ESS) PI Meeting*, 2024. [link]

34. [**ESS-PI'24**] Chen, Xingyuan; Li, Bing; **Li, Zhi**; Niroula, Sundar; Ahmadullah, Tasneem; Jiang, Peishi; Muller, Katherine A; Hammond, Glenn E; Zheng, Jianqiu; Song, Hyun-Seob. "Developing Integrated Hydrobiogeochemical Modeling from Batch to Watershed Scales." *Environmental System Science (ESS) PI Meeting*, 2024. [link]

33. [**ESS-PI'24**] Chen, Xingyuan; Zahura, Faria Tuz; Bisht, Gautam; **Li, Zhi**; McDowell, Nate G; Jiang, Peishi; Zhang, Qianyu; Liu, Heping. "Watershed Ecohydrological Responses to Disturbances under Changing Climate." *Environmental System Science (ESS) PI Meeting*, 2024. [link]

32. [**AGU'23**] **Li, Zhi**; Li, Bing; Jiang, Peishi; Hammond, Glenn E; Barnes, Morgan; Myers-Pigg, Allison N; Chen, Xingyuan. "Modeling the fates of pyrogenic carbon in the wildfire-impacted Pacific Northwest watersheds." *AGU Fall Meeting*, 2023. [link]

31. [**AGU'23**] Chen, Xingyuan; **Li, Zhi**; Jiang, Peishi; Muller, Katherine A; Hammond, Glenn E; Song, Hyun-Seob. "Linking Organic Carbon Chemistry with Watershed Carbon Cycling." *AGU Fall Meeting*, 2023. [link]

30. [**AGU'23**] Li, Bing; **Li, Zhi**; Zheng, Jianqiu; Regier, Peter J; Ding, Jun Yan; O'Meara, Teri; Pennington, Stephanie C; Ward, Nicholas D; Chen, Xingyuan. "Unraveling Coastal Biogeochemistry: Understanding the Impact of Saltwater Inundation through Integrated Modeling Approaches." *AGU Fall Meeting*, 2023. [link]

29. [**AGU'23**] Stegen, James C; Datry, Thibault; Busch, Michelle H; Fisher, Joshua B; Zheng, Jianqiu; Herndon, Elizabeth M; Bam, Edward K; Painter, Scott L; Roche, Kevin Robert; Seybold, Erin; Sweetman, Jon; Kinsman-Costello, Lauren; Abrahamson, Jenna; Guimond, Julia; Regier, Peter J; Ladau, Joshua; Boye, Kristin E; Forbrich, Inke; Vander Vorste, Ross; Middleton, Beth; Burgin, Amy; Song, Hyun-Seob; Chen, Xingyuan; Fluet-Chouinard, Etienne; Bao, Jie; **Li, Zhi**; Deines, Jillian M; Li, Li; Rod, Kenton A; Scheibe, Timothy D; Wohl, Ellen. "Variable Inundation Across Earth's Terrestrial Ecosystems." *AGU Fall Meeting*, 2023. [link]

28. [**AGU'23**] Kaufman, Matthew; Delgado, Dilman; Barnes, Morgan; Boehnke, Brandon; Chen, Xingyuan; Cornwell, Kali; Forbes, Brianne; Fulton, Stephanie; Garayburu-Caruso, Vanessa; Goldman, Amy; Gonzalez, Brianna; Grieger, Samantha; Hammond, Glenn; Jiang, Peishi; Laan, Maggi; Li, Bing; **Li, Zhi**; McKever, Sophia; Mudunuru, Maruti; Muller, Katherine; Myers-Pigg, Allison N; Otenburg, Opal; Pelly, Aaron; Peta, Kelsey; Regier, Peter; Renteria, Lupita; Roebuck, Alan; Scheibe, Timothy; Son, Kyongho; Torgeson, Joshua; Hall, Robert; Zheng, Jianqiu; Stegen, James. "Respiration partitioning in the Yakima River Basin." *AGU Fall Meeting*, 2023. [link]

27. [**AGU'23**] Coon, Ethan; Painter, Scott L; Moulton, John D; Bhanja, Soumendra N; Chen, Xingyuan; Gao, Bo; Jiang, Peishi; Li, Bing; **Li, Zhi**; Lipnikov, Konstantin; Molins, Sergi; Perez, Gabriel; Rathore, Saubhagya S; Shuai, Pin; Svyatskiy, Daniil; Xu, Zexuan. "How large-domain datasets have fundamentally altered the scale and complexity of spatially explicit hydrologic modeling." *AGU Fall Meeting*, 2023. [link]

26. [**IMAGE'23**] Doro, Kennedy O; Adebayo, Moses B; Bailey, Vanessa L; Chen, Xingyuan; Hopple, Anya M; Jiang, Peishi; Li, Bing; **Li, Zhi**; Megonigal, Patrick; Ward, Nicholas D. "A hydrogeophysical imaging and modeling approach for predicting soil water saturation during a simulated coastal flooding experiment." *The International Meeting for Applied Geoscience & Energy*, 2023. [link]

25. [**RCEM'23**] Luo, Yi; **Li, Zhi**; Langendoen, Eddy J; Garcia, Marcelo H. "Applications of geeCenterline, A New River Planform and Migration Detection Algorithm Based on Google Earth Engine." *IAHR 13th River, Coastal And Estuarine Morphodynamics Symposium*, 2023. [link]

24. [**RCEM'23**] Abad, Jorge D; Marin-Diaz, Jesus; Rojas-Carbajal, Tania; **Li, Zhi**; Mendoza, Alejandro; Dominguez-Ruben, Lucas Gerardo. "Characterizing meandering and anabranching rivers in the Amazon basin." *IAHR 13th River, Coastal And Estuarine Morphodynamics Symposium*, 2023. [link]

23. [**Goldschmidt'23**] Chen, Xingyuan; Li, Bing; **Li, Zhi**; Jiang, Peishi; Muller, Katherine A; Hammond, Glenn E; Zheng, Jianqiu; Song, Hyun-Seob. "Reactive Transport Modeling for Watershed Carbon and Nitrogen Cycling." *Goldschmidt*, 2023. [link]

22. [**Goldschmidt'23**] Kaufman, Matthew; Delgado, Dilman; Barnes, Morgan; Boehnke, Brandon; Chen, Xingyuan; Cornwell, Kali; Forbes, Brianne; Fulton, Stephanie; Garayburu-Caruso, Vanessa; Goldman, Amy; Gonzalez, Brianna; Grieger, Samantha; Hammond, Glenn; Jiang, Peishi; Laan, Maggi; Li, Bing; **Li, Zhi**; McKever, Sophia; Mudunuru, Maruti; Muller, Katherine; Myers-Pigg, Allison N; Otenburg, Opal; Pelly, Aaron; Peta, Kelsey; Regier, Peter; Renteria, Lupita; Roebuck, Alan; Scheibe, Timothy; Son, Kyongho; Torgeson, Joshua; Hall, Robert; Zheng, Jianqiu; Stegen, James. "Respiration partitioning across the Yakima River Basin." *Goldschmidt*, 2023. [link]

21. [**SWS'23**] Li, Bing; **Li, Zhi**; Jiang, Peishi; Zheng, Jianqiu; Regier, Peter J; Hammond, Glenn E; Ward, Nicholas D; Pennington, Stephanie C; Chen, Xingyuan. "Investigating the Integrated Effects of Hydrology and Vegetation on

Carbon Cycling at the Coastal Terrestrial-Aquatic Interface." *Society of Wetland Scientists Annual Meeting*, 2023. [link]

20. [**ICRW'23**] **Li, Zhi**; Li, Bing; Jiang, Peishi; Hammond, Glenn E; Shuai, Pin; Chen, Xingyuan. "Evaluating watershed hydrologic responses to wildfires in the Pacific Northwest using high-resolution numerical models." *8th Interagency Conference on Research in the Watersheds*, 2023. [link]

19. [**ESS-PI'23**] **Li, Zhi**; Li, Bing; Jiang, Peishi; Hammond, Glenn E; Shuai, Pin; Coon, Ethan; Muller, Katherine A; Myers-Pigg, Allison N; Barnes, Morgan E; Song, Hyun-Seob; Chen, Xingyuan; Moulton, David. "Watershed hydrologic and biogeochemical responses to wildfires in the Pacific Northwest." *Environmental System Science (ESS) PI Meeting*, 2023. [link]

18. [**ESS-PI'23**] Chen, Xingyuan; Myers-Pigg, Allison N; Barnes, Morgan E; Bladon, Kevin; Hammond, Glenn E; Jiang, Peishi; Kang, Hyunwoo; **Li, Zhi**; Scheibe, Timothy D; Wampler, Katie. "The Influence of Wildfires on Hydrobiogeochemical Processes: A MODEX Perspective." *Environmental System Science (ESS) PI Meeting*, 2023. [link]

17. [**ESS-PI'23**] Jiang, Peishi; **Li, Zhi**; Hammond, Glenn E; Muller, Katherine A; Song, Hyun-Seob; Garayburu-Caruso, Vanessa A; Kaufman, Matthew H; Fulton, Stephanie G; Stegen, James C; Chen, Xingyuan. "Integrated Modeling of Carbon and Nitrogen Cycling at the Yakima River Basin." *Environmental System Science (ESS) PI Meeting*, 2023. [link]

16. [**AGU'22**] **Li, Zhi**; Shuai, Pin; Chen, Xingyuan. "Evaluating the transport of wildfire-induced pyrogenic nutrients in a grassland-shrub dominant watershed using a high-res numerical model." *AGU Fall Meeting*, 2022. [link]

15. [**AGU'22**] Luo, Yi; **Li, Zhi**; Langendoen, Eddy J; Garcia, Marcelo H. "Obtaining synthetic riverbed topography of meandering rivers from satellite imagery: a case study of the Tallahatchie River, Mississippi." *AGU Fall Meeting*, 2022. [link]

14. [**AGU'21**] Luo, Yi; **Li, Zhi**; Langendoen, Eddy J; Garcia, Marcelo H. "An integrated river planform and sandbar detection tool based on Google Earth Engine and its application in the Yazoo-Mississippi Delta with high-resolution satellite images." *AGU Fall Meeting*, 2021. [link]

13. [**AGU'20**] **Li, Zhi**; Wang, Dongchen; Garcia, Marcelo H. "Modeling the hydrodynamics of Chicago Area Waterway System (CAWS) and nearshore areas in Lake Michigan: Investigation of different flow behaviors under low and high Lake Michigan level conditions." *AGU Fall Meeting*, 2020. [link]

12. [**AGU'20**] Guo, Xingyan; Xu, Mengzhen; Wang, Ruiyu; **Li, Zhi**; Chen, Dong; Garcia, Marcelo H; Best, Jim; Parker, Gary. "Triangle Shaped Bends Associated with Peat in the Zoige Basin, Northeast Qinghai-Tibet Plateau, China." *AGU Fall Meeting*, 2020. [link]

11. [**LargeRivers'20**] **Li, Zhi** and Garcia, Marcelo H. "Human impact on long-term meandering river migration." *IAHR International Conference on the Status and Future of the World's Large Rivers*, 2020 (postponed to 2021).

10. [**RiverFlow'20**] **Li, Zhi** and Garcia, Marcelo H. "2D numerical modeling on meander chute cutoffs." *IAHR River Flow Conference*, 2020. doi: 10.1201/b22619-74

9. [**RiverFlow'20**] Guo, Xingyan; Parker, Gary; **Li, Zhi**; Garcia, Marcelo H; Chen, Dong; Tanaka, Gaku. "Sinuous rivers in peat." *IAHR River Flow Conference*, 2020. doi: 10.1201/b22619-219

8. [**RCEM'19**] **Li, Zhi** and Garcia, Marcelo H. "Numerical modeling on meander chute cutoffs using hybrid deterministic-stochastic method." *IAHR 11th River, Coastal And Estuarine Morphodynamics Symposium*, 2019. [link]

7. [**AGU'18**] **Li, Zhi** and Garcia, Marcelo H. "An Improved Analytical Method to Generate Synthetic Bed Topography of Single-thread Constant-width Meandering Rivers." *AGU Fall Meeting*, 2018. [link]

6. [**ISEH'18**] **Li, Zhi** and Garcia, Marcelo H. "Two-dimensional and three-dimensional hydrodynamic modeling of the Calumet River System and Indiana Harbor and Ship Canal." *IAHR 8th International Symposium on Environmental Hydraulics*, 2018.

5. [**AGU'17**] **Li, Zhi** and Garcia, Marcelo H. "Morphodynamic Responses of a River Floodplain System to a Chute Cutoff: Numerical Experiments to Investigate the Role of Multiple Active Factors." *AGU Fall Meeting*, 2017. [link]

4. [**RCEM'17**] Mendoza, Alejandro; Abad, Jorge D; **Li, Zhi**; Arroyo, Maricela. "Migration of meandering rivers junction modeled numerically." *IAHR 10th River, Coastal And Estuarine Morphodynamics Symposium*, 2017. [link]

3. [**IllinoisWater'16**] **Li, Zhi** and Garcia, Marcelo H. "Numerical investigation of pre-cutoff hydrodynamics." *Illinois Water Conference*, 2016.

2. [**AGU'16**] Mendoza, Alejandro; Abad, Jorge D; **Li, Zhi**; Arroyo, Maricela. "Planform evolution modeling of confluences in meandering rivers." *AGU Fall Meeting*, 2016. [link]

1. [**RiverFlow'16**] **Li, Zhi**; Mendoza, Alejandro; Abad, Jorge D; Endreny, Theodore A; Smallidge, Colin D; and Han, Bangshuai. "Cutoff processes and their importance for bed and planform morphodynamic adaptation." *IAHR River Flow Conference*, 2016. doi: 10.1201/9781315644479

SKILLS

- **Surface water, groundwater, sediment transport, reactive transport models:** TELEMAC, Delft3D, HEC-RAS, PFLOTRAN, Advanced Terrestrial Simulator (ATS), ParFlow, MODFLOW
- **CFD models:** OpenFOAM, FLOW-3D, Ansys Fluent, STAR-CCM+, COMSOL
- **GIS & CAD:** ArcGIS, QGIS, AutoCAD, Civil 3D
- **HPC:** Rich experience in deploying & managing HPC projects on the world's largest supercomputers and AWS EC2
- **Cloud:** AWS Certified Cloud Practitioner
- **Scientific visualization:** ParaView, Tecplot, VisIt, EnSight, Python-Matplotlib, R
- **Scientific computing languages:** C++, Fortran, Python, JAVA, R

GRANTS, SCHOLARSHIPS, AWARDS, HONORS

- [**DOE**] PI of one of the ten 2024 Department of Energy (DOE) Environmental System Science (ESS) Program ESS-DIVE Community Funds.
- [**PNNL**] Outstanding performance postdoctoral research associate (2022, 2023).
- [**TACC**] Fellowship of the Texas Advanced Computing Center (TACC) 2020 Summer Institute on Computational Research Techniques - Scientific Visualization.
- [**CSDMS**] Travel fund scholarship of the 2020 CSDMS Annual Meeting.
- [**NSF**] Assisted PI in writing the allocation proposal requesting supercomputing resources on the NSF-supported XSEDE platform (Grant Number TG-CTS190067).

SERVICE

- Reviewer of scholarly journals: Advances in Water Resources | Journal of Hydrology | Water Resources Research | Environmental Fluid Mechanics | Journal of Hydrologic Engineering | Journal of Hydraulic Engineering | Computers and Geosciences | Journal of Marine Science and Engineering | Geology | Stochastic Environmental Research and Risk Assessment | Scientific Reports
- Convener of sessions H41A, H42A, H43A, and H51K in AGU Fall Meeting 2024
- Convener of sessions GC43C and GC51R in AGU Fall Meeting 2023
- AGU Earth and Planetary Surface Processes (EPSP) Section student committee member (2021-2022), duties include hosting AGU EPSP Early Career Spotlight
- Student volunteer of AGU Fall Meeting 2020, duties include monitoring virtual meeting attendance and facilitating online discussions
- Treasurer of IWRA student chapter at the University of Illinois (2019-2020), duties include managing IWRA activity funds, fundraising, and communication
- Exhibitor of UIUC Engineering Open House (2017-2020), duties include developing hydrology and hydraulics-related exhibitions for K-12 students

PROFESSIONAL AFFILIATIONS

- Member, American Geophysical Union (AGU) and Gilbert Geomorphology Club
- Member, International Water Resources Association (IWRA)
- Member, International Association for Hydro-Environment Engineering and Research (IAHR)

- Member, American Society of Civil Engineers (ASCE)
- Member, The United States Research Software Engineer Association (US-RSE)