

DR. CAITLIN A. GRADY
CURRICULUM VITAE

Assistant Professor, Engineering Management and Systems Engineering
The George Washington University, 800 22nd St. NW Rm 2660, Washington DC, 20052
Email: Caitlin.grady@gwu.edu, Office: (202)–994–225

EDUCATION

PhD, Purdue University, School of Civil Engineering, West Lafayette, IN, 2015.
Civil and Environmental Engineering; Ecological Sciences and Engineering
MS, Purdue University, College of Engineering, West Lafayette, IN, 2011.
Agricultural and Biological Engineering; Ecological Sciences and Engineering
BA, Virginia Polytechnic Institute and State University, College of Liberal Arts, Blacksburg, VA, 2010.
Humanities, Science, and the Environment, Environmental Policy and Planning

EMPLOYMENT

Assistant Professor, The George Washington University. (September 2022 – Present).
Environmental & Energy Management Institute, Dir. of Science & Innovation. (January 2023 – Present).

Assistant Professor and Research Associate, Penn State University. (August 2017 – July 2022).
Joint Appointment, Department of Civil and Environmental Engineering & The Rock Ethics Institute. Faculty Fellow in the Center for Security Research and Education.

Management Analyst, *contractor*. Department of State. (March 2016 – December 2017).
Served as a finance analyst responsible for helping to secure terms and commitments in excess of \$300–million USD on behalf of the U.S. Delegation to the Montreal Protocol and the Multilateral Fund including on the negotiating team for the Kigali Amendment. Led team coordination including organization of meetings and identifying and tracking strategic opportunities for diplomatic outreach. Drafted and deployed briefing material for Secretary level meetings and embassies carrying out diplomatic outreach.

Energy Policy Analyst, *contractor*. Department of Energy. (January 2016 – March 2016).
Advised senior staff in preparation for Secretary level meetings. Analyzed, drafted, and prepared policy papers, scientific journals, and briefing documents relating to the water and energy nexus.

Legislative Assistant, United States House of Representatives. (January 2015 – December 2015).
Advised Congresswoman Betty McCollum on energy, water, financial services, civil rights, and agriculture issues. Managed appropriations proposals on Energy & Water, Agriculture–FDA, and Financial Services US House Appropriations subcommittees. Held constituent group meetings.

National Science Foundation Graduate Research Fellow, Purdue University. (2012 – 2015).
Department of Civil and Environmental Engineering

Graduate Teaching Assistant, Purdue University. (August 2011 – December 2012).
Department of Civil and Environmental Engineering

Graduate Research Assistant, Purdue University. (August 2010 – December 2011).
Department of Agricultural and Biological Engineering

EXTERNAL RESEARCH SUPPORT

- G8 NSF OISE – “Center: Global Centers Track 2: Green Energy Transitions in the Far North (GET North)” \$249,997. PI: Robert Orttung, Co-PIs, S. LeBlanc, **C. Grady**, C.S Topkok, M. Hahn. 10/15/2023 – 09/30/2025.
- G7 NSF IUSE – “Engaged student learning through coupled ethical–epistemic pedagogy” \$393,800. PI: **C. Grady**. 100% Credit. 10/01/2023 – 09/30/2026.
- G6 NSF CBET – 2333676 Career-Life Balance Supplemental Funding to NSF award 2244715, \$55,432. PI: **C. Grady**. 100% Credit. 08/01/2023 – 12/31/2023.
- G5 NSF CBET – 1941657/2244715 “CAREER: Ethical implications of connected critical infrastructure in the food–energy–water nexus,” \$509,880. PI: **C. Grady**. 100% Credit. 01/01/2020 – 12/31/2024.
- G4 NSF DGE – 1828822 “NRT–INFEWS: Landscape–U, Impactful partnerships among graduate students and managers for regenerative landscape design,” \$3,018,896.00. Penn State University PI: E. Smithwick, co-PIs, J. Kaye (PSU), L. Glenna (PSU), J. Baka (PSU), **C. Grady** (PSU), K. Keller (PSU), A. Graefe (PSU). Grady portion, approximately \$335,960. 09/1/2018 – 8/31/2023.
- G3 USDA NIFA – 2019–68012–29904 “Thriving Agricultural Systems in Urbanized Landscapes,” \$8,975,094. Penn State University PI: D.G. Abler, D. G. co-PIs: E.C. Jaenicke, E. C. (PSU), J. Kaye (PSU), J. Shortle (PSU), W. Thomason (VT), L. Wainger (UMD), M. Royer (PSU), **C. Grady**, **C.** (GWU), C. Raj (PSU), K. Chaudhary (PSU). Grady is PI at GWU. Grady portion, approximately \$678,000 total, portion transferred to GWU \$145,000. 09/01/2019 – 08/31/2024.
- G2 U.S. Borlaug Global Food Security Research Award – “Graduate Research Grant Program” Grant to support field research in Kenya and Vietnam. \$19,300. PI **C. Grady**
- G1 NSF GRFP – “National Science Foundation Graduate Research Fellowship” Funding for PhD fellowship, 3 years (equivalent of \$132,000). PI **C. Grady**

ACADEMIC HONORS AND AWARDS

- Selected as a Non-Resident Fellow to the Chicago Council on Global Affairs (2023 – 2025)
- Lawrence J. Perez Memorial Student Advocate Award, Penn State (2021)
- National Science Foundation CAREER Award (2020)
- Center for Security Research and Education Faculty Fellowship, Penn State (2019)
- Faculty Appreciation Award, Penn State School of International Affairs (2018)
- Certificate of Appreciation, U.S. Department of State. (2017)
- Women’s Congressional Policy Institute Legislative Fellowship (December 2014)
- Oak Ridge Institute for Science and Education (ORISE) Fellowship (December 2015)
- National Science Foundation Graduate Research Fellow, National Science Foundation (2012 – 2014)
- Most Outstanding Interdisciplinary Project, Purdue University (2013)
- Across Borders Fellow – Early Career Award, Department of State, Dickinson University. (2011)
- Best Student Presentation, Indiana Lakes Management Society. (2011)

SCHOLARLY PUBLICATIONS

REFEREED JOURNAL ARTICLES

Underline indicates advisee; * graduate student, **undergraduate student, † postdoc

The convention in my field is that the last author denotes intellectual direction by senior author when students are engaged. On non-student papers, authorship effort is denoted in standard order.

- J34 Gomez, M., † and **Grady, C.** (2023). A Balancing Act: The Interplay of Food Supply Chain Resilience and Environmental Sustainability in American Cities. *Environmental Research Letters*. Accepted/In Press.
- J33 Smithwick, E., Baka, J., Bird, D. Blaszcak-Boxe, C., Cole, C.A., Fuentes, JD., Gergel, S.E., Glenna, L., **Grady, C.** Hunt, C. Iulo, L.D., Kaye, J. and K. Keller. (2023). Regenerative Landscape Design: An Integrative Framework to Enhance Sustainability Planning. *Ecology & Society*. Accepted/In Press.
- J32 Lenze, V.,** Hinojos, S.* **Grady, C.** (2023). Combining Socioeconomic, Demographic, and Zoning Data to Explore Urban Inequality in Pittsburgh. *Journal of Urban Planning and Development*. Accepted/In Press.
- J31 Hinojos, S.,* McPhillips, L., Stempel, P., & **Grady, C.** (2023). Social and environmental vulnerability to flooding: Investigating cross-scale hypotheses. *Applied Geography*. <https://doi.org/10.1016/j.apgeog.2023.103017>.
- J30 Delgado, L.,* Gomez, M.,† Hinojos, S.,* Dennis, L.,* & **Grady, C.** (2023). Investigating social vulnerability, exposure, and transport network disruption in the Mid-Atlantic Region. *Journal of Infrastructure Systems*. <https://doi.org/10.1061/JITSE4/ISENG-2258>.
- J29 **Grady, C.**, Torhan S.,* Dennis, L.,* Gomez, M.,* Hinojos, S.,* Mohammadpour, P.,* & Delgado, L.* (2023). Hidden Gems: Highlighting Underrepresented but Valuable Knowledge in the Water-Energy-Food Nexus. *Journal of Hydrology*. <https://doi.org/10.1016/j.jhydrol.2023.129597>.
- J28 Mohammadpour, P.,* & **Grady, C.** (2023). Regional Analysis of Nitrogen Flow within the Chesapeake Bay Watershed Food Production Chain Inclusive of Trade. *Environmental Science & Technology*. 57, no. 11: 4619–31. <https://doi.org/10.1021/acs.est.2c07391>.
- J27 Yavari Bajehbaj*, R., Wu, H., **Grady, C.**, Brent, D., Clark, S.E., Raj, C., Duncan, J.M., Chaudhary, A.K., & McPhillips, L.E. (2023). Identifying Sweet Spots for Green Stormwater Infrastructure Implementation: A Case Study in Lancaster, Pennsylvania. *Journal of Sustainable Water in the Built Environment*. Vol 9, no. 3: 05023004. <https://doi.org/10.1061/JSWBAY.SWENG-513>.
- J26 Chiles, R.M., Drohan, P.J., Raj, C., O’Sullivan, L., Doody, D., Schulte, R.P.O., **Grady, C.**, Jiang, F.,* Preisendanz, H., Dingkuhn, E.,* Veith, T.L., & Anderson, A.* (2023). Optimization and Reflexivity in Interdisciplinary Agri-Environmental Scholarship. *Frontiers in Sustainable Food Systems*. 7. <https://doi.org/10.3389/fsufs.2023.1083388>.
- J25 Chiles, R.M., Ard, K., Teixeira-Poit, S., Flora, C., Williams, R., & **Grady, C.** (2022). Empowering Students to Confront Environmental Injustice: Dialogue, Theory, Empathy, and Partnership. *SN Social Sciences*. Vol 2, no. 12. <https://doi.org/10.1007/s43545-022-00564-9>.
- J24 Dennis, L.,* & **Grady, C.** (2022). Watery Research Boundaries: A Bibliometric and Network Science Approach to Explore Gaps and Overlaps in Water Research. *Water Security*. Vol 16: 100117. <https://doi.org/10.1016/j.wasec.2022.100117>.
- J23 Torhan, S.,* **Grady, C.**, Ajibade, I., Galappaththi, E. K., Hernandez, R. R., Musah-Surugu, J. I., Nunbogu, A.M., Segnon, A.C., Shang, Y., Ulibarri, N., Campbell, D., Joe, E.T., Penuelas, J., Sardans, J., & Shah, M.A.R. (2022). Tradeoffs and Synergies Across Global

- Climate Change Adaptations in the Food-Energy-Water Nexus. *Earth's Future*. 10, no. 4. <https://doi.org/10.1029/2021EF002201>.
- J22 Hawes, J. K.,* Johnson, R., Payne, L., Ley, C., **Grady, C. A.**, Domenech, J., Evich, C. D., Kanach, A., Koeppen, A., Roe, K., Caprio, A., Puente Castro, J., LeMaster, P., & Blatchley, E. R. (2021). Global service-learning: A systematic review of principles and practices. *International Journal of Research on Service-Learning and Community Engagement*, 9(1), Article 11. <https://doi.org/10.37333/001c.31383>
- J21 Deitrick, A.R.,** Torhan, S.A.,* & **Grady, C.** (2021). Investigating the Influence of Ethical and Epistemic Values on Decisions in the Watershed Modeling Process. *Water Resources Research*. 57, no. 12. <https://doi.org/10.1029/2021WR030481>.
- J20 Ransom, E., **Grady, C.**, Trepanier, L.*, & Bain, C. (2021). Situated Ethics in Development: STS Insights for a Pragmatic Approach to Development Policy and Practice. *Science, Technology, & Human Values*. <http://dx.doi.org/10.1177/01622439211052685>.
- J19 Berrang-Ford, L., Siders, A. R., Lesnikowski, A., Fischer, A. P., Callaghan, M. W., Haddaway, N. R., Mach, K. J., Araos, M., Shah, M. A., Wannewitz, M., Doshi, D., Leiter, T., Matavel, C., Musah-Surugu, J. I., Wong-Parodi, G., Antwi-Agyei, P., Ajibade, I., Chauhan, N., Kakenmaster, W., **Grady, C.**, Chalastani, V. I., Jagannathan, K., Galappaththi, E. K., Sitati, A., Scarpa, G., Totin, E., Davis, K., Hamilton, N. C., Kirchhoff, C. J., Kumar, P., Pentz, B., Simpson, N. P., Theokritoff, E., Deryng, D., Reckien, D., Zavaleta-Cortijo, C., Ulibarri, N., Segnon, A. C., Khavhagali, V., Shang, Y., Zvobgo, L., Zommers, Z., Xu, J., Williams, P. A., Canosa, I. V., van Maanen, N., van Bavel, B., van Aalst, M., Turek-Hankins, L. L., Trivedi, H., Trisos, C. H., Thomas, A., Thakur, S., Templeman, S., Stringer, L. C., Sotnik, G., Sjostrom, K. D., Singh, C., Siña, M. Z., Shukla, R., Sardans, J., Salubi, E. A., Safae Chalkasra, L. S., Ruiz-Díaz, R., Richards, C., Pokharel, P., Petzold, J., Penuelas, J., Pelaez Avila, J., Murillo, J. B., Ouni, S., Niemann, J., Nielsen, M., New, M., Nayna Schwerdtle, P., Nagle Alverio, G., Mullin, C. A., Mullenite, J., Mosurska, A., Morecroft, M. D., Minx, J. C., Maskell, G., Nunbogu, A. M., Magnan, A. K., Lwasa, S., Lukas-Sithole, M., Lissner, T., Lilford, O., Koller, S. F., Jurjonas, M., Joe, E. T., Huynh, L. T., Hill, A., Hernandez, R. R., Hegde, G., Hawxwell, T., Harper, S., Harden, A., Haasnoot, M., Gilmore, E. A., Gichuki, L., Gatt, A., Garschagen, M., Ford, J. D., Forbes, A., Farrell, A. D., Enquist, C. A., Elliott, S., Duncan, E., Coughlan de Perez, E., Coggins, S., Chen, T., Campbell, D., Browne, K. E., Bowen, K. J., Biesbroek, R., Bhatt, I. D., Bezner Kerr, R., Barr, S. L., Baker, E., Austin, S. E., Arotoma-Rojas, I., Anderson, C., Ajaz, W., Agrawal, T., & Abu, T. Z. (2021). A systematic global stocktake of evidence on human adaptation to climate change. *Nature Climate Change*. 11(11), 989–1000. <http://dx.doi.org/10.1038/s41558-021-01170-y>
- J18 Araos, M., Jagannathan, K., Shukla, R., Ajibade, I., Coughlan de Perez, E., Davis, K., Ford, J. D., Galappaththi, E. K., **Grady, C.**, Hudson, A. J., Joe, E. T., Kirchhoff, C. J., Lesnikowski, A., Alverio, G. N., Nielsen, M., Orlove, B., Pentz, B., Reckien, D., Siders, A. R., Ulibarri, N., van Aalst, M., Abu, T. Z., Agrawal, T., Berrang-Ford, L., Kerr, R. B., Coggins, S., Garschagen, M., Harden, A., Mach, K. J., Nunbogu, A. M., Spandan, P., Templeman, S., & Turek-Hankins, L. L. (2021). Equity in human adaptation-related responses: A systematic global review. *One Earth*. 4(10), 1454–1467. <http://dx.doi.org/10.1016/j.oneear.2021.09.001>
- J17 Thomas, A., Theokritoff, E., Lesnikowski, A., Reckien, D., Jagannathan, K., Cremades, R., Campbell, D., Joe, E. T., Sitati, A., Singh, C., Segnon, A. C., Pentz, B., Musah-Surugu, J. I., Mullin, C. A., Mach, K. J., Gichuki, L., Galappaththi, E., Chalastani, V. I., Ajibade, I., Ruiz-Díaz, R., **Grady, C.**, Garschagen, M., Ford, J., & Bowen, K. (2021). Global evidence of constraints and limits to human adaptation. *Regional Environmental Change*. 21(3). <http://dx.doi.org/10.1007/s10113-021-01808-9>

- J16 Calder, R. S., **Grady, C.**, Jeuland, M., Kirchhoff, C. J., Hale, R. L., & Muenich, R. L. (2021). COVID–19 Reveals Vulnerabilities of the Food–Energy–Water Nexus to Viral Pandemics. *Environmental Science & Technology Letters*. 8(8), 606–615. <http://dx.doi.org/10.1021/acs.estlett.1c00291>
- J15 Trepanier, L.*, Orare, J., Nyagwencha, J., & **Grady, C.** (2021). How are we actually doing? Comparing water and sanitation in Kenya with MDG and SDG criteria. *Journal of Water, Sanitation and Hygiene for Development*. 11(4), 638–656. <http://dx.doi.org/10.2166/washdev.2021.023>
- J14 **Grady, C.**, Rajtmajer, S., & L. Dennis*. (2021). When smart systems fail: the ethics of cyber–physical critical infrastructure risk. *IEEE Transactions on Technology and Society*. <https://doi.org/10.1109/TTS.2021.3058605>.
- J13 Dennis, L.*, S. Rajtmajer, & **Grady, C.** (2021). A Social Vulnerability Analysis of Risk Due to Cyberphysical Threats to Pennsylvania Dams. *IEEE Transactions on Technology and Society*. 2021. <https://doi.org/10.1109/TTS.2021.3078450>.
- J12 Mahjabin, T.*, A. Mejia, & **Grady C.** (2021). Virtual Nitrogen and Virtual Water Transfers Embedded in Food Trade Networks across the US. *Environmental Research Letters*. 16, no. 4 (April 1, 2021): 045015. <https://doi.org/10.1088/1748-9326/abe06f>.
- J11 Gomez, M.*, Garcia, S.*, Rajtmajer, S. M., **Grady, C.**, & Mejia, A. (2020). Fragility of the multilayer network of supply chains in the United States. *Applied Network Science*. 5:71. <https://doi.org/10.1007/s41109-020-00310-1>.
- J10 Lintern, A., McPhillips, L., Winfrey, B., Duncan, J. M., & **Grady, C.** (2020). Best management practices for diffuse nutrient pollution: wicked problems across urban and agricultural watersheds. *Environmental Science & Technology*. <https://doi.org/10.1021/acs.est.9b07511>
- J9 Mahjabin, T.*, Mejia, A., Blumsack, S.A., & **Grady, C.** (2020). Integrating embedded resources and network analysis to understand food–energy–water nexus in the US. *Science of The Total Environment*. doi.org/10.1016/j.scitotenv.2019.136153
- J8 Mohammadpour, P.*, Mahjabin, T.*, Fernandez, J.*, & **Grady, C.** (2019). From national indices to regional action—An analysis of food, energy, water security in Ecuador, Bolivia, and Peru. *Environmental Science & Policy*. 101, 291–301. <https://doi.org/10.1016/j.envsci.2019.08.014>
- J7 **Grady, C.**, Blumsack, S., Mejia, A., & Peters, C. A. (2019). The Food–Energy–Water Nexus: Security, Sustainability, and Systems Perspectives. *Environmental Engineering Science*. 36(7). doi.org/10.1089/ees.2019.0170
- J6 Mahjabin, T.*, Garcia, S.*, **Grady, C.**, & Mejia, A. (2018). Large cities get more for less: water footprint efficiency across the US. *PLOS One*. 13(8), 1–17.
- J5 **Grady, C.**, Nguyen, K.V., Nguyen, T.V., & Blatchley, E.R. (2018). Who is being left behind? An analysis of WASH access in the Vietnamese Mekong Delta. *Journal of Water, Sanitation and Hygiene for Development*. 8(3), 508–519.
- J4 **Grady, C.**, He, X., & Peeta, S. (2015). Integrating social network analysis with analytic network process for international development project selection. *Expert Systems with Applications*. 42(12), 5128–5138.
- J3 **Grady, C.**, Kipkorir, E. C., Nguyen, K., & Blatchley, E. R. (2015). Microbial quality of improved drinking water sources: evidence from western Kenya and southern Vietnam. *Journal of Water and Health*. 13(2), 607 LP – 612.
- J2 **Grady, C.**, Reimer, A. P., Frankenberger, J., & Prokopy, L. S. (2013). Locating existing best management practices within a watershed: The value of multiple methods. *Journal of the American Water Resources Association*. 49(4), 883–895.
- J1 **Grady, C.**, & Younos, T. (2012). Bottled water technology and its global ramifications: An overview. *International Water Technology Journal*. 2(2), 185–195.

REFEREED ARTICLES IN CONFERENCE PROCEEDINGS

- CP5 Dennis, L.,* Rajtmajer, S., & **Grady, C.** (2020). Analyzing cyber–physical threats to Pennsylvania dams through a lens of vulnerability. *IEEE Social Implications of Technology, International Symposium on Technology and Society*. November 2020.
- CP4 **Grady, C.**, Rajtmajer, S. & Dennis, L.* (2020). Emerging threats and ethical implications of cyber–physical critical infrastructure. *IEEE Social Implications of Technology, International Symposium on Technology and Society*. November 2020.
- CP3 **Grady, C.**, Mohammadpour, P.,* & Mahjabin, T.*. (2020). Embedded resources and connected networks: Ideas for research and implementation of water, energy, and food SDGs. *International Conference on Sustainable Development*. September 2020.
- CP2 Garcia, S.,* Rajtmajer, S. M., **Grady, C.**, Mohammadpour, P.,* & Mejia, A. (2019). "Performance of a Multi–layer Commodity Flow Network in the United States Under Disturbance." *Complex Networks and Their Applications VIII.*, 882 . Springer. https://doi.org/10.1007/978-3-030-36683-4_52.
- CP1 Menold, J., Berdanier, C., Ritter, S., Handley, M., Starkey, E., Byron, M., **Grady, C.**, Miller, S. R., & Parkinson, M. (2019). BUILDing a community of female makers through hands–on experiences in a university MakerSpace. *2019 IEEE Frontiers in Education Conference (FIE)*. IEEE.

BOOKS AND BOOK CHAPTERS

- B4 Younos, T., & **Grady, C.** (Co–Editor) (2014). *Potable water: emerging global problems and solutions*. (The Handbook of Environmental Chemistry). Springer. ISBN 9783319065632
- B3 **Grady, C.**, Weng, S., & Blatchley, E. R. (2014). Global potable water: current status, critical problems and future perspectives. *Potable Water: Emerging Global Problems and Solutions*. (The Handbook of Environmental Chemistry), (pp. 37–59). Springer.
- B2 Younos, T., & **Grady, C.** (Co–Editor) (2013). *Climate change and water resources*. (The Handbook of Environmental Chemistry). Springer. ISBN 978-3-642-37586-6
- B1 Chen, Y.S., Li, L., Jiang, L., **Grady, C.**, & Li, X.H. (2013). The impact of urban water use on energy consumption and climate change: A case study of household water use in Beijing. *Climate Change in Water Resources*. (The Handbook of Environmental Chemistry), (pp. 169–197). Springer. ISBN 978-3-642-37585-9

CONFERENCE PRESENTATIONS

No paper submitted, presentation only, selected based on abstract. This mode is common in the environmental, sustainability, and earth science domain.

- C33 **Grady, C.** & Dennis, L.* 2023. Ethical–epistemic values driving decisions under uncertainty: The case of hydropower in the United States. *Forum on Philosophy, Engineering, & Technology*. Delft, Netherlands.
- C32 Hinojos, S.* & **Grady, C.** 2022. Social and Environmental Vulnerability to Flooding: Investigating Cross–Scale Hypotheses. *American Geophysical Union*. Chicago IL.
- C31 Dennis, L.* & **Grady, C.** 2022. A Balancing Act: Examining Climate Impacts on Hydropower at the Balancing Authority Scale. *American Geophysical Union*. Chicago IL.
- C30 Lenze, V.,** Hinojos, S.,* **Grady, C.** 2022. Urban Inequality: Combining sociodemographic, zoning, and engineering development data to plan more equitable designs. *American Society of Civil Engineering EWRI Congress*. Atlanta, GA
- C29 Calder, R., **Grady, C.**, Jeuland, MA., Kirchhoff, C., Rodgers, S., Hale, R.L., & Muenich, R.L. (December 2021). "Increasing resiliency of integrated food–energy–water systems to viral pandemics: lessons from COVID–19." *American*

- Geophysical Union Fall Meeting 2021*. Oral and Poster Presentation. New Orleans, LA.
- C28 Torhan, S.,* **Grady, C.**, I.Ajibad, E.Galappaththi, R.R Hernande, J.Musah–Surugu, A.Nunbogu, A.Segnon, Y.Shang, N.Ulibarri, D.Campbell, E.T.Joe, J.Penuelas, J.Sardans, M.A. Rahman Shah. (December 2021). “A Global Characterization of Adaptations Addressing Vulnerabilities Across the Food–Energy–Water Nexus.” *American Geophysical Union Fall Meeting 2021*. New Orleans, LA.
- C27 Mohammadpour, P.* & **Grady, C.** (December 2021). “What Does Trade Have to Do with It? A Regional Analysis of Nitrogen Flow across the Chesapeake Bay Watershed.” *American Geophysical Union Fall Meeting 2021*. Poster and Oral Presentation. New Orleans, LA.
- C26 Dennis, L.* & **Grady, C.** (December 2021). “Spatial Analysis of Climate Impacts on the Energy System: Will our Interconnected Infrastructure Complicate Who is Impacted?.” *American Geophysical Union Fall Meeting 2021*. Oral Presentation. New Orleans, LA.
- C25 Dennis, J.,** **C. Grady**, & S. Rajtmajer. (October 2021). “Comparative Assessment of Cyber–Physical Threats to Megacities.” In *2021 IEEE International Symposium on Technology and Society (ISTAS)*. Waterloo, ON, Canada: IEEE, 2021. <https://doi.org/10.1109/ISTAS52410.2021.9629170>.
- C24 Rouhangiz, Y.,* L. McPhillips., D. Brent, H. Wong, & **Grady, C.** (June 2021). Decision making framework for detecting sweetspots for green infrastructure implementation in the urban areas. American Society of Civil Engineering EWRI Congress.
- C23 **Grady, C.**, Dennis, L.,* Delgado L.* & Hinojos S.* (December 2020). “Investigating the Impacts of Disruption on Interdependent Critical Infrastructure across the Food, Energy, Water, Nexus.” *American Geophysical Union Fall Meeting 2020*. Oral Presentation. (Virtual).
- C22 **Grady, C.**, Torhan, S.,* & Trepanier L.* (December 2020). “Globally Mapped Adaptations across Water, Food, and Energy Systems: Interlinkages, Synergies, and Consequences.” *American Geophysical Union Fall Meeting 2020*. Poster Presentation. (Virtual).
- C21 Mahjabin, T.* & **Grady, C.** (December 2020). “Quantifying Virtual Nitrogen Transfers in the US Food Trade and Mapping Associated Uncertainties.” *American Geophysical Union Fall Meeting 2020*. Poster Presentation. (Virtual).
- C20 Deitrick, A.** & **Grady, C.** (December 2020). “Investigating Explicit and Implicit Decisions of Modelers Across Three Watershed Models.” *American Geophysical Union Fall Meeting 2020*. Poster Presentation. (Virtual).
- C19 Mohammadpour, P.* & **Grady, C.** (December 2020). “Nitrogen Pollution Embedded in Commodity Supply Chains and Trade; Linking Systems and Scales across Water, Energy, and Land.” *American Geophysical Union Fall Meeting 2020*. Poster Presentation. (Virtual).
- C18 Dennis, L.,* Rajtmajer, S., & **Grady, C.** (November 2020). “Analyzing cyber–physical threats to Pennsylvania dams through a lens of vulnerability.” *IEEE Social Implications of Technology, International Symposium on Technology and Society*. November 2020. Tempe, AZ. (Virtual).
- C17 **Grady, C.**, Rajtmajer, S., & Dennis, L.* (November 2020). “Emerging threats and ethical implications of cyber–physical critical infrastructure.” *IEEE Social Implications of Technology, International Symposium on Technology and Society*. Tempe, AZ. (Virtual).
- C16 **Grady, C.**, Mohammadpour, P.,* & Mahjabin, T.* (September 2020). “Embedded resources and connected networks: Ideas for research and implementation of

- water, energy, and food SDGs." International Conference on Sustainable Development. New York, NY (Virtual).
- C15 Mohammadpour, P.* & Grady, C. (July 2020). "Quantifying the effects of trade throughout the Chesapeake Bay on its nitrogen balance." *Northeast Agricultural and Biological Engineering Conference, American Society of Agricultural and Biological Engineers*, State College, PA (Virtual).
- C14 Mohammadpour, P.* & Grady, C. (December 2019). "From National Indices to Regional Action—an Analysis of Food, Energy, Water Security in Ecuador, Bolivia, and Peru," *2019 Food–Energy–Water Nexus Conference, American Institute of Chemical Engineers*, New York, NY.
- C13 Mahjabin, T.* & Grady, C. (December 2019). "Investigating the Food–Energy–Water Nexus through Embedded Resource Accounting," *2019 Food–Energy–Water Nexus Conference, American Institute of Chemical Engineers*, New York, NY.
- C12 Garcia, S.,* Rajtmajer, S. M., **Grady, C.**, Mohammadpour, P.* & Mejia, A. (December 2019). "Performance of a Multiplex Commodity Flow Network in the United States Under Disturbance," *The 8th International Conference on Complex Networks and Their Applications*, Lisbon, Portugal, peer-reviewed/refereed.
- C11 **Grady, C.** (September 2019). "From the academy to the gauntlet: An engineer goes to Washington," *NSF Research Traineeship (NRT) Annual Meeting, National Science Foundation*, Evanston, IL.
- C10 Oerther, D., Lowry, G., Naughton, C., **Grady, C.**, & Gregory, K. (May 16, 2019). "Public Policy and AAAS: AEESP Government Affairs Committee," Panel Discussion. *Association of Environmental Engineering and Science Professors Education & Research Conference 2019*, Tempe, AZ.
- C9 **Grady, C.**, Fowler, L., Bezerra, M., Edmond, J. and C. Soto. (August 28, 2019). "Women on water: Perspectives on effective stakeholder engagement," *World Water Week*, Stockholm International Water Institute, Stockholm, Sweden.
- C8 Mahjabin, T.* Mohammadpour, P.* & **Grady, C.** (May 20, 2019). "Development and Characterization of the Virtual Water Flow Network Associated with Interstate Food and Energy Transfers," *World Environment and Water Resources Congress, American Society of Civil Engineers Environmental & Water Resources Institute*, Pittsburgh, PA.
- C7 Mohammadpour, P.* Mahjabin, T.* & **Grady, C.** (May, 2019). "Critical infrastructure nodes: Network modeling of U.S. ports for the food, water, energy security nexus," *Association of Environmental Engineering and Science Professors Education & Research Conference 2019*, Tempe, AZ.
- C6 Grady, C., Mahjabin, T.* Fernandez, J.* & Mohammadpour, P.* (December, 2018). "Implementing the Sustainable Development Goals: An Inquiry into Regional Variation of Food, Energy, and Water Security in Ecuador, Bolivia, and Peru," *American Geophysical Union Fall Meeting*, Washington, DC.
- C5 Mahjabin, T.* Blumsack, S.A., Mejia, A., & **Grady, C.** (December 10, 2018). "Interstate Virtual Water Network in Food and Energy Trade: A Framework for Studying WFE Nexus," *American Geophysical Union Fall Meeting*, Washington, DC.
- C4 Trepanier, L.* & **Grady, C.** (October 12, 2018). "When Good Intentions Fall Flat: the Ethics of University Involvement in International Development," *International Conference on Ethics Across the Curriculum, Society of Ethics Across the Curriculum*, Rochester, NY.
- C3 Grady, C. (March 3, 2018). "Science and Engineering in the Modern age: An investigation into case-based learning for STEM ethics education," *Association of*

- Practical and Professional Ethics Annual Meeting, Association of Practical and Professional Ethics, Chicago, IL.*
- C2 Grady, C. (December 14, 2017). "The Montreal Protocol Treaty and its Illuminating History of Science–Policy Decision–Making," *American Geophysical Union Fall Meeting*, New Orleans, LA. International.
- C1 Mahjabin, T., * Garcia, S., * **Grady, C.**, & Mejia, A. (December 12, 2017). "Scaling of the Urban Water Footprint: An Analysis of 65 Mid– to Large–Sized U.S. Metropolitan Areas," *American Geophysical Union Fall Meeting*, New Orleans, LA. International.

INVITED CONFERENCE PRESENTATIONS

- I3 **Grady, C.**, Dennis, L., * Torhan, S. * 2022. Climate Change, Impacts, and Adaptations: Studying Vulnerabilities Across the Food–Energy–Water Nexus. *American Geophysical Union*. Chicago IL.
- I2 **Grady, C.** August 2019. Field Research and Technical Writing, Data visualization and data–driven story–telling skills, *Mekong Environment Forum*, Can Tho, Vietnam. International.
- I1 **Grady, C.** August 2019. Panaceas or painkillers – what role for sustainability assessment tools?, *World Water Week*, Stockholm International Water Institute, Stockholm, Sweden. International.

INVITED SEMINARS

- S15 “Unveiling Vulnerability: Exploring Social and Environmental Factors in Flooding Across Different Scales.” Deltares Speaker Series. The Netherlands (April 2023).
- S14 “Networked Perspectives: Illuminating the Nexus of Sustainability, Security, and Ethics in Resource Systems.” Arizona State University Environmental Engineering Seminar. (March 2023).
- S13 “Investigating Social and Environmental Vulnerability to Flooding Across Scale.” American Society of Civil Engineering National Capital Region EWRI Seminar. (December 2023).
- S12 “Reflections on incentives across a variety of contexts.” Wageningen University. The Netherlands. (March 2022).
- S11 “The context of connections: using networks to understand sustainability, security, and ethics across resource systems.” University of Iowa. National Research Traineeship Seminar. (March 2022).
- S10 “Energy and the Environment in Transition”. UC Davis and Cornell University. Wild Energy Series. (October 2021).
- S9 “Bridging disciplines to explore environmental resilience and equity across water, food, and energy systems.” University of Illinois at Chicago. (October 2021).
- S8 “Scarcity and Abundance: Understanding Water and Nitrogen Tradeoffs Across the Food–Energy–Water Nexus”. University of Maryland. (April 2021).
- S7 "Navigating the Hill and the DC job market: lessons from a past LA," Women's Congressional Policy Institute, Washington, DC. (April 2020).
- S6 “Understanding the Food–Energy–Water nexus through interdisciplinary tools: An exploration of networks, embedded resource accounting, and ethics”. University of Iowa. Iowa City, IA. *Cancelled due to COVID–19*. (March 2020).
- S5 "Finding Allies In Academia," Women in Engineering Program, Purdue University, West Lafayette, IN, (December 2019).
- S4 "Skill building and the real world: non–traditional paths through academia," Ecological Sciences and Engineering Program, Purdue University, West Lafayette, IN, (December 2019)..

- S3 "Bridging disciplines to explore the water food energy nexus," IHE Delft, Delft, Netherlands. International. (June 2018).
- S2 "Large cities get more for less: Using footprints and network analysis to measure the Water, Food, Energy Nexus across the United States," McMaster University, Hamilton, Canada. International. (October 2018).
- S1 "Negotiating the Kigali Amendment to the Montreal Protocol," University of Maryland. (April 2017).

SELECTED MEDIA: IMPACT IN SOCIETY OF RESEARCH SCHOLARSHIP

- Selected as a Non-Resident Fellow for the Chicago Council on Global Affairs (2023 – 2025) in recognition of international expertise in sustainability, food, and agriculture.
- Quoted in Law360 article "What the Feds' Colorado River Plan Could Mean for the West" April, 2023. <https://www.law360.com/articles/1597564/what-the-feds-colo-river-plan-could-mean-for-the-west>
- Journal Article Cited in the "2023 Economic Report of the President" from the White House Council on Economic Advisors
- Quoted in National Radio Story: How drought zaps electricity production and could raise prices, National Public Radio, 2022 Aug. <https://www.marketplace.org/2022/08/18/how-drought-zaps-electricity-production-and-drives-up-prices/>
- Conducted local radio interview: How Hydropower Impacts The Electric Grid, WORT, 2022 May. <https://www.wortfm.org/how-hydropower-impacts-the-electric-grid/>
- Article, "Desde indices nacionales hasta la accion regional" un analisis sobre la seguridad de la comida, agua y energia en Ecuador, Bolivia, and Peru," Magazine, Economica, Lima, Peru, Revista Economica Ano 6 Numero 10. (June 2020). Economica magazine featured a Spanish translated version of one of my research articles in their 10th edition Journal/Magazine.
- Blog Post, "WEF Nexus Knowledge Hub Publication Feature," Web, WEF Nexus, Germany. (March 23, 2020). Blog post feature of my publication on FEW Security in Latin America
- Policy Memo, "SDG challenges relating to water, sanitation, and hygiene," U.S. Agency for International Development (USAID), Washington, D.C. (October 2019). Policy memo requested and submitted to Global Water Coordinator at the U.S. Agency for International Development (USAID)
- Article, "Data Visualization and Data-driven Storytelling Skills," Web, Mekong Environment Forum. (September 2019). Workshop report featuring contribution.
- Article, "Larger cities consume less water per person, says Penn State," Journal or Magazine, Water Environment and Technology, Water Environment Federation, Vol 31 Number 2. (February 2019).

TEACHING AND ADVISING

GEORGE WASHINGTON UNIVERSITY

- Systems Thinking and Policy Modeling (EMSE6740) Sp. 23
- Thesis Research with Graduate Students Every Semester

PENN STATE UNIVERSITY

- Fluid Mechanics (CE360) F. 17, 20, 21 Sp. 19, 20
- Ethics, Engineering and Environmental Management (CE597) Sp. 18, 19, 20, 21
- Special Topic: Literature Survey Resilience & Climate Change (CE592) F. 21
- Independent Studies & Honors Research, Undergraduate Every Semester
- Thesis Research with Graduate Students Every Semester

GUEST LECTURES AT GEORGE WASHINGTON UNIVERSITY

<u>Course Name</u>	<u>Course Title</u>	<u>Semester</u>	<u>Year</u>	<u>Sections</u>	<u>Students</u>
IAFF 3190	COP Process Fighting Climate Change	Fall	2023	1	30
EMSE 3740W	Systems Thinking and Policy Modeling	Fall	2023	1	10
SEAS 1001	Engineering Orientation	Fall	2022	1	12

GUEST LECTURES AT PENN STATE

<u>Course Name</u>	<u>Course Title</u>	<u>Semester</u>	<u>Year</u>	<u>Sections</u>	<u>Students</u>
CE 100S	Topics and Contemporary Issues in Civil Eng	Fall	2021	2	25
PHIL 133N	Ethics of Climate Change	Spring	2021	1	100
CE 465W	Civil Engineering Capstone Course	Spring	2021	1	197
EARTH 111	Water: Science and Society	Spring	2020	1	20
CE 465W	Civil Engineering Capstone Course	Spring	2020	4	231
ME 340	Mechanical Engineering Design Methodology	Fall	2019	1	131
CE 590	Civil Engineering Colloquium	Fall	2019	1	37
ESC 514	Engineering Science and Mechanics Seminar	Fall	2019	1	54
METEO 133N	Ethics of Climate Change	Fall	2019	1	65
NUCE 431	Nuclear Reactor Core Design Synthesis	Spring	2019	1	45
INTAF 502	Science, Technology, and International Policy	Spring	2019	1	9
METEO 133N	Ethics of Climate Change	Spring	2019	2	65
CE 465W	Civil Engineering Capstone Course	Spring	2019	4	187
METEO 133N	Ethics of Climate Change	Fall	2018	2	65
CE 465W	Civil Engineering Capstone Course	Spring	2018	4	210
EDSGN 100	Introduction to Engineering Design	Fall	2017	1	30

DIRECTED STUDENT LEARNING – RESEARCH GROUP MEMBERS

GRADUATE STUDENTS

**indicates funding provided by PI Grady through external grants, †indicates funding provided by PI Grady through internal university sponsored support such as teaching assistantships or start up.*

°indicates student funded through other means including government fellowships or other faculty.

Current Students

Selena Hinojos,* Ph.D. Dissertation Advisor, Systems Engineering. (August 2022 – Present).

Qi Ji,* Ph.D. Dissertation Advisor, Systems Engineering. (August 2023 – Present).

Abbey Kollar,° Ph.D. Dissertation Advisor, Systems Engineering. (August 2023 – Present).

Elsa Dingkuhn,° PhD Dissertation Co-Advisor, Farming System Ecology. Wageningen University (August 2020 – Present)

Completed Students

Lauren Dennis,* “Systems-level Analyses of Water and Energy Security in a Changing Climate”
Ph.D. Dissertation Advisor, Civil Engineering and Climate Science. (August 2019 – May 2023).

Paniz Mohamadpour,* “Maximizing Human–Environmental Security by Analyzing the Food, Energy and Water Interconnections” Ph.D. Dissertation Advisor, Civil Engineering and Landscape Ecology. (August 2018 – May 2023).

Selena Hinojos,*† “Social and Environmental Vulnerability to Flooding: Investigating Cross–scale Hypotheses” Masters Thesis Advisor, Civil Engineering. (August 2020 – August 2022).

Luis Delgado,*† “An Exploration of Social Vulnerability, Exposure, and Freight Transport Network Disruption in the Mid–Atlantic Region” Master’s Thesis Advisor, Civil Engineering. (August 2020 – August 2022).

Sarah Torhan,† “A Global Characterization of Adaptations addressing Vulnerabilities across the Food–Energy–Water Nexus.” Master’s Thesis Advisor, Civil Engineering. (August 2020 – December 2021).

Elsa Dingkuhn,° “When unriddling information pathways reveals governance opportunities: The case of best practices adoption by dairy farmers in central Pennsylvania.” Master's Thesis Co–Advisor, Organic Agriculture. Wageningen University (August 2017 – August 2019).

Jose Fernandez,° “Writing Portfolio – Food, Water, Energy Security in South America.” Masters Paper Advisor, Civil Engineering. (September 2017 – May 2018).

Tasnuva Mahjabin,† “Integrating Embedded Resources and Network Analysis to Understand Food–Energy–Water Nexus in the US.” Ph.D. Dissertation Advisor, Civil Engineering. (August 2016 – May 2020).

Completed Students – Committee Member

Kanembe Shanachilubwa, “The STEM Graduate Student Experience: A Study of Well–Being, Disenchantment, and Socialization” PhD Thesis Committee Member, Mechanical Engineering. (August 2018 – August 2023).

Kathryn Hayden, “Measuring and Addressing the Presence and Impact of Endocrine Disrupting Compounds From Anthropogenic Sources in Waterways” PhD Thesis Committee Member, Agricultural and Biological Engineering. (August 2019 – December 2022).

Elsa Dingkuhn, “When unriddling information pathways reveals governance opportunities: The case of best practices adoption by dairy farmers in central Pennsylvania.” Master's Thesis Co–Advisor, Organic Agriculture. Wageningen University (August 2017 – August 2019).

Nasli Barçın Doğan, “The Supply Chain Structure of Cities: Implications for Urban Resilience and Sustainability.” Master’s Thesis Committee Member, Civil Engineering. (August 2019 – August 2021).

Fiorella Giselle Oreggioni Weiberlen, “Predicting Commodity and Virtual Water Flows Using Machine Learning: Analysis of Modeling Experiments and Time Series Predictions with Random Forest.” Master's Thesis Committee Member, Civil Engineering. (June 2018 – August 2020).

UNDERGRADUATE STUDENTS

Victoria Lenze, “Urban Inequality: Combining Sociodemographic, Zoning, and Engineering Development Data to Plan More Equitable Designs.” Undergraduate Honors Thesis (August 2021 – May 2022).

Yuchen Fu, Undergraduate Research Assistant (August 2021 – May 2022).

Autumn Deitrick, “Investigating Explicit and Implicit Decisions of Modelers across Three Watershed Models.” Undergraduate Honors Thesis (February 2020 – May 2021).

Abigail Crowser, “Investigating Water Access Challenges for Emerging and Developing Countries: Vietnam and Kenya Case Study.” Undergraduate Honors Thesis (January 2019 – May 2020).

John Iffert, “Engineering, Technology, and Ethics Undergraduate Research Fellowship Program.” Supervision of Funded Undergraduate Research (August 2018 – May 2019). “Investigating

Disparities in Flood Insurance Rate Map Adoption." Undergraduate Honors Thesis (August 2018 – May 2019).

Andrew Pannone, Supervision of Funded Undergraduate Research (August 2017 – August 2018).

Warren Sipe, "Rock Ethics Institute Undergraduate Fellowship." Supervision of Funded Undergraduate Research (August 2019 – May 2020).

Ryan Jacobs, Vidur Mishra, Christopher Thomas, and Nicholas Wanner. "Engineering, Technology, and Ethics Undergraduate Research Fellowship Program." Supervision of Funded Undergraduate Research (August 2018 – May 2019).

AWARDS TO STUDENT RESEARCH GROUP MEMBERS

Autumn Deitrick – National Science Foundation Graduate Research Fellowship 2021

Sarah Torhan – National Science Foundation Graduate Research Fellowship Honorable Mention 2021

Sarah Torhan – National Defense Science and Engineering Graduate Fellowship 2022

Selena Hinojos – Penn State University Benton–Waller Fellowship 2020–2021

Luis Delgado – National GEM Consortium GEM Fellow 2018– Present

Luis Delgado – Penn State University Bunton–Waller Fellowship 2020–2021

Abby Cowser – American Society of Civil Engineers 2020 New Faces of Civil Engineering, 2020

Abby Cowser – Penn State John W. Oswald Award, 2020

Lauren Dennis – Penn State University Graduate Dissertation Excellence Award, 2023

Lauren Dennis – Penn State University Graduate Excellence Fellowship, 2019–2020

Lauren Dennis – National Science Foundation National Research Traineeship Fellowship, 2020–2021

Paniz Mohammadpour – CUAHSI Travel Scholarship to attend a workshop, Spring 2019

Jack Iffert – Ralph Dorn Hetzel Memorial Award, Spring 2019

Jack Iffert – Engineering Technology and Ethics Fellowship, Fall 2018

Tasnuva Mahjabin –Travel award to attend the National Socio–Environmental Synthesis Center Graduate Student Workshop on Socio–Environmental Synthesis, Fall 2018

SERVICE

SERVICE TO THE UNIVERSITY – INTERNAL

Departmental & SEAS School Service – George Washington University

- School of Engineering and Applied Sciences Computing Committee (Fall 2022 – Present)
- Department Operations Lead Hiring Committee (Spring 2023)
- Scribe for faculty meetings (Fall 2022 – Present)
- Advised a senior design team (Fall 2022 – Spring 2023)
- Organized external speaker event. “Systems Resilience: How do we enable a sustainable & secure future?” Including speakers from the White House and top think tanks (Fall 2022)
- Director of Science and Innovation, Environmental & Energy Management Institute (Spring 2023 – Present)

Departmental & College of Engineering Service – Penn State University

- Law, Policy, and Engineering Working Group, Co-Chairperson. (2018 – 2022).
- Schreyer Honors College Ethics Committee, Member. (2018 – 2022).
- Energy 2100, Board Member. (April 2018 – August 2022).
- Water Consortium Committee on Graduate Education, Co-Chairperson. (2019 – 2020).
- Search Committee for USDA Project Coordinator, Member. (2020).
- Rock Ethics Institute
 - Steering Committee, Member. (2017 – 2022).

- Post– Doctoral Fellow Search Committee, Member. (2019 –2020).
 - Faculty Fellows Review Committee, Reviewer. (2019).
- Department of Civil and Environmental Engineering
 - Graduate Program Committee, Member (2020 – 2022).
 - Search Committee, Member (2020 –2021).
 - Research Innovation Committee, Member. (2019 –2020).
 - Committee on TA and Grader Policies, Co-Chairperson. (2018 –2019).
 - 2018 Harleman Lecture, Coordinator. (2018).
 - Teaching Performance Committee, Member. (2017 – 2018).
- School of International Affairs Search Committee, Member. (2017 – 2018).

Assistance to Student Organizations – The George Washington University

- National Lockheed Martin Engineering Ethics Case Competition, Faculty Advisor. (December 2022 – February 2023).

Assistance to Student Organizations – Penn State University

- Humanitarian Engineering and Social Entrepreneurship Program, Judge. (2019).
- American Society of Civil Engineering Student Chapter, Presenter. (2019).
- College of Engineering Graduate Research Forum, Judge. (April 2018).
- Student Perspectives on Engineering Culture, Faculty Advisor. (2019 – 2022).
- Lockheed Martin Engineering Ethics Case Competition, Faculty Advisor. (2017 – 2019).
- Penn State Lehigh Valley Cuba CHANCE Program, Judge. (2018).
- College of Engineering Leonhard Center Speaking Contest, Judge. (2017).

Contribution to Programs to Enhance Equal Opportunity/Cultural Diversity – Penn State University

- Millennium Scholars Faculty Advisory Network. (2021 –2022).
- Learning Factory Build Nights for Undergraduate Women Engineering Students, Faculty Mentor. (2019 – 2022).
- College of Engineering STEM Fall Open House, Recruiting event for underrepresented groups, Faculty Representative, (2018, 2019).
- Millennium Scholars Interview Weekend, Faculty Interviewer. (2020).

SERVICE TO THE DISCIPLINES AND TO THE PROFESSION - EXTERNAL

Service to Citizen and/or Client Groups

- The Pennsylvania Agricultural Mediation Program, Mediator. (August 2019 – Present).
- Strategy Consultant, McCallister & Quinn (October 2022 – Present).
- Strategy Coach and Consultant, Thorn Run Partners (May 2023 – Present).

Organizing Conferences and Service on Conference Committees

- American Geophysical Union Fall Meeting, Session Co–Organizer. (2018, 2019, 2020).
- Association of Environmental Engineering & Science Professors, Annual Meeting Session Moderator. (2019).
- 20th International Conference on Ethics Across the Curriculum, Session Chairperson. (2018).
- American Geophysical Union Outstanding Student Paper Awards, Judge. (2017, 2018).

Contribution to Programs to Enhance Equal Opportunity/Cultural Diversity

- Consortium of Universities for the Advancement of Hydrologic Science, Inc. (CUAHSI),

- Diversity Equity and Inclusion Committee Chair. (May 2021 – Present)
- Society of Hispanic Professional Engineers (SHPE) National Convention Graduate Track Peer Review Session, Faculty Reviewer (October 2020).
- Científico Latino Graduate School Mentorship Initiative, Científico Latino, Mentor. (August 2020 – August 2022).
- Científico Latino Graduate School Mentorship Initiative, Científico Latino, Program Representative. (August 2020 – August 2022).
- Society for Advancement of Chicanos and Native Americans in Science, National Diversity Conference, Reviewer, student presentations and student travel awards. (May 2020).
- Society for Advancement of Chicanos and Native Americans in Science, National Diversity Conference, Reviewer, student presentations and student travel awards. (May 2019).

Participation in or Service to Professional and Learned Societies

- Universities Council on Water Resources, Penn State Delegate. (2019 – 2022).
- Association of Environmental Engineering & Science Professors, Government Affairs Committee, Committee Member. (2019 – Present).
- American Geophysical Union – Mentoring 365, Faculty Mentor. (2018 – Present).
- Consortium of Universities for the Advancement of Hydrologic Science, Inc. (CUAHSI), Diversity Equity and Inclusion Committee Chair. (May 2021 – Present)
- American Geophysical Union, Hazards Equity Working Group, Committee Member. (July 2020 – July 2022).

Service to Governmental Agencies

- National Science Foundation, Ad-hoc Reviewer. (2020, 2022).
- National Science Foundation, Panel Member. (2019, 2022, 2023).

Editorial and Advisory Boards

- Sustainability Analytics and Modeling, Editorial Board. (November 2021 – present).
- Environmental Engineering Science, Special Issue Editor. (September 2018 – July 2019).
Special Issue Editor on the Water, Food, Energy Nexus

Peer Reviewer

Earth's Future

Energies

Environmental Engineering Science

Environmental Monitoring and Assessment

Environmental Research Letters

Environmental Science and Policy

International Development Planning Review

Journal of the American Water Resources

Association

*Journal of Water Resources Planning and
Management*

Nature Communications

Science of the Total Environment

Science and Engineering Ethics

Sustainability

Transportation Research Board Annual Meeting

The Professional Geographer

Water

Water Resources Research