WEIWEI MO, Ph.D.

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EDUCATION

Ph.D., Environmental Engineering	University of South Florida	December 2012
M.S., Environmental Engineering	University of South Florida	May 2011
B.S., Environmental Engineering	Shanghai Jiao Tong University	June 2008

EMPLOYMENT

University of New Hampshire	Associate Professor	Aug 2021 - present
University of New Hampshire	Assistant Professor	Jan 2015 - Aug 2021
University of New Hampshire	Post-doctoral Associate	Jul 2014 - Jan 2015
Yale University	Post-doctoral Associate	Apr 2013- Jun 2014
University of South Florida	Research Assistant	Aug 2009 - Dec 2012
Michigan Technological University	Research Assistant	Aug 2008-Jul 2009

SELECTED AWARDS AND HONORS

Best poster award, 2022 AEESP Conference	2022
Platinum Sustainability Award in Faculty Research, University of New Hampshire	2022
Faculty Scholar Award, University of New Hampshire	2022
National Science Foundation CAREER Award	2021
Water Environment Research 2019 Best Paper Award (marked by A in Journal Papers)	2020
Roland H. O'Neal Professorship, University of New Hampshire	2019-2022
Award of Excellence in Research, College of Engineering and Physical Sciences	2019
Best poster award (first place), New England Water Works Association Conference	2019
Best poster award (first place), Water Quality Technology Conference	2018
Best poster award, Society of Ecological Restoration New England Regional Conference	2017
Graduate School Summer Faculty Fellowship, University of New Hampshire	2016
Faculty Development Grant, University of New Hampshire	2016
Fudi Scholarship, Shanghai Jiao Tong University	2007
Academic Excellence Scholarship (ranked 2/50), Shanghai Jiao Tong University	2007
Academic Excellence Scholarship (ranked 1/50), Shanghai Jiao Tong University	2006

REFEREED JOURNAL PAPERS

(Student/postdoc co-authors that I advised/co-advised are underlined. "" indicates corresponding authors.)*

1. **W Mo***, D Hart, CM Ashcraft, M Chester, S Cucurachi, Z Lu, SA Miller, "Integrating knowledge co-production with life cycle assessment," *Resources, Conservation and Recycling* 188, 106650, **2022**.
2. S Jakositz, R Ghasemi, B McGreavy, H Wang, S Greenwood, **W Mo***, "Tap-Water Lead Monitoring through Citizen Science: Influence of Socioeconomics and Participation on Environmental Literacy, Behavior, and Communication," *Journal of Environmental Engineering* 148 (10), 04022060, **2022**.
3. R Ghasemi, Y Li, Z Lu*, JC Huang, **W. Mo***, "Spatial household preferences of decentralized solar photovoltaic and thermal systems," *Resources, Conservation and Recycling* 185, 106487, **2022**.
4. Y Li, **W Mo**, S Derrible, Z Lu, "Integration of multi-objective spatial optimization and data-driven interpretation to direct the city-wide sustainable promotion of building-based decentralized water technologies," *Water Research* 222, 118880, **2022**.
5. TS Bixler, C Song, **W Mo***, "Comparing Centralized and Point-of-Use Treatments of Per- and

Polyfluoroalkyl Substances," *AWWA Water Science,* 3 (6), **2021**.

6. G Guglielmi, B Mitchell, C Song, BL Kinsey*, **W Mo***, "Life Cycle Environmental and Economic Comparison of Water Droplet Machining and Traditional Abrasive Waterjet Cutting", *Sustainability*, 13(21), 12275, **2021**.
7. M Khalkhali, B Dilkina*, **W Mo***, "The energy implication of climate change on urban wastewater systems," *Water Research*, 207, 117830, **2021**.
8. Li Y., M Khalkhali, **W Mo***, Z Lu*, "Modeling spatial diffusion of decentralized water technologies and impacts on the urban water systems," *Journal of Cleaner Production*, 315, 128169, **2021**.
9. S Stang, M Khalkhali, M Petrik, M Palace, Z Lu, **W Mo***, "Spatially optimized distribution of household rainwater harvesting and greywater recycling systems," *Journal of Cleaner Production*, 312, 127736, **2021**.
10. R Maskwa, K Gardner, **W Mo***, "A spatial life cycle cost comparison of residential greywater and rainwater harvesting systems," *Environmental Engineering Science*, 38(8), **2021**.
11. D Feng, C Song, **W Mo***, "Environmental, human health, and economic implications of landfill leachate treatment for per-and polyfluoroalkyl substance removal", *Journal of Environmental Management*, 289, 112558, **2021**.
12. M Ren, CR Mitchell, **W Mo***, "Managing residential solar photovoltaic-battery systems for grid and life cycle economic and environmental co-benefits under time-of-use rate design," *Resources, Conservation and Recycling,* 169, 105527, **2021**.
13. KE Haslett, JF Knott, AMK Stoner, JE Sias, EV Dave, JM Jacobs, **W Mo**, K Hayhoe, "Climate change impacts on flexible pavement design and rehabilitation practices," *Road Materials and Pavement Design*, 1-15, **2021**.
14. C Song, NL Diessner, CM Ashcraft, **W Mo***, "Can science-informed, consensus-based stakeholder negotiations achieve optimal dam decision outcomes?" *Environmental Development*, 37, 100602, **2021**.
15. C Song, A O'Malley, J Zydlewski, **W Mo***, "Balancing fish-energy-cost tradeoffs through strategic basin-wide dam management," *Resources, Conservation & Recycling*, 161, 104990, **2020**.
16. M Khalkhali, **W Mo***, "The energy implication of climate change on urban wastewater systems," *Journal of Cleaner Production*, 267, 121905, **2020**.
17. TS Bixler, J Houle, T Ballestero, **W Mo***, "A spatial life cycle cost assessment of stormwater management systems," *Science of the Total Environment*, 728, 138787, **2020**.
18. M Ren, CR Mitchell, **W Mo***, "Dynamic life cycle economic and environmental assessment of residential solar photovoltaic systems," *Science of the Total Environment*, 722, 137932, **2020.**
19. S Jakositz, L Pillsbury, S Greenwood, M Fahnestock, B McGreavy, J Bryce, **W Mo***, "Protection through participation: Crowdsourced tap water quality monitoring for enhanced public health," *Water Research*, 169, 115209, **2020**.
20. Z Lu, **W Mo***, B Dilkina, K Gardner, S Stang, JC Huang, MC Foreman, "Decentralized Water Collection Systems for Households and Communities: Household Preferences in Atlanta and Boston," *Water Research*, 167, 115-134, **2019**.
21. TS Bixler, J Houle, T Ballestero, **W Mo***, "A Dynamic Life Cycle Economic and Environmental Assessment of Green Infrastructures," *Science of the Total Environment*, 692, 1146-1154, **2019**.
22. C Song, **W Mo***, "A temporal perspective to dam management: influence of dam life and threshold fishery conditions on the energy-fish tradeoff," *Stochastic Environmental Research and Risk Assessment*, 1-12, **2019**.
23. KE Haslett, EV Dave, **W Mo**, "Realistic Traffic Condition Informed Life Cycle Assessment: Interstate 495 Maintenance and Rehabilitation Case Study," *Sustainability*, 11:12, 3245, **2019**.
24. C Song, A O'Malley, SG Roy, BL Barber, J Zydlewski, **W Mo***, "Managing dams for energy and fish tradeoffs: What does a win-win solution take?" *Science of the Total Environment*, 669, 833-843, **2019**.
25. PK Cornejo, J Becker, K Pagilla, **W Mo**, Q Zhang, JR Mihelcic, K Chandran, B Sturm, D Yeh, D Rosso, "Sustainability Metrics for Assessing Water Resource Recovery Facilities of the Future," *Water Environment Research*, 91(1):45-53, **2019**. A

26. SG Roy, E Uchida, SP de Souza, B Blachly, E Fox, K Gardner, A Gold, J Jansujwicz, S Klein, B McGreavy, **W Mo**, SMC Smith, E Vogler, K Wilson, J Zydlewskik, D Hart, "Damming decisions: a multi-scale approach to balance trade-offs among dam infrastructure, river restoration, and cost," *Proceedings of National Academy of Sciences,* 115 :47, 12069-12074, **2018**.
27. **W Mo***, PK Cornejo, JP Malley, TE Kane, MR Collins, "Life Cycle Environmental and Economic Implications of Small Drinking Water System Upgrades to Reduce Disinfection Byproducts," *Water Research*, 143:155-164, **2018**.
28. **W Mo***, Z Lu, B Dilkina, K Gardner, J Huang, MC Foreman, "Sustainable and Resilient Design of Interdependent Water and Energy Systems: Tackling Complexities at the Infrastructure-Human-Resource Nexus," *Sustainability*, 10(6), 1845, **2018**.
29. M Khalkhali, K Westphal, **W Mo***, "The Water-Energy Nexus in Drinking Water Supply and Its Implications on the Integrated Water and Energy Management," *Science of the Total Environment*, 636, 1257-1267, **2018**.
30. S Stang, H Wang, K Gardner, **W Mo***, "Influences of Water Quality and Climate on the Water-Energy Nexus: A Spatial Comparison of Two Water Systems," *Journal of Environmental Management*, 218, 613-621, **2018**.
31. C Song, K Gardner, S Klein, SP Souza, **W Mo***, "Cradle-to-Grave Greenhouse Gas Emissions from Dams in the United States of America," *Renewable & Sustainable Energy Reviews*, 90, 945-956, **2018**.
32. **W Mo***, D Balen, M Moura, K Gardner, "A Regional Analysis of the Life Cycle Environmental and Economic Tradeoffs of Different Economic Growth Paths," *Sustainability*, 10, 542, **2018**.
33. **W Mo***, Q Zhang, "Modeling the Influence of Various Water Stressors on Regional Water Supply Infrastructures and Their Embodied Energy," *Environmental Research Letters*, 11, 064018, **2016**.
34. **W Mo***, H Wang, J Jacobs, "Understanding the Influence of Climate Change on the Embodied Energy of Water Supply – A Case Study in Northeast U.S.," *Water Research*, 95, 220-229, **2016**.
35. **W Mo***, L Soh, J Webber, M Elimelech, J Zimmerman, "Application of Membrane Dewatering for Algal Biofuel," *Algal Research*, 11, 1-12, **2015**.
36. **W Mo**, R Wang, J Zimmerman, "An Energy-Water Nexus Analysis of Enhanced Water Supply Scenarios: A Regional Comparison of Tampa, Florida and San Diego, California," *Environmental Science & Technology*, 48:10, 5883-5891, **2014**.
37. **W Mo**, Q Zhang, "Energy-Nutrients-Water Nexus: Integrated Resource Recovery in Wastewater Treatment Plants," *Journal of Environmental Management*, 127, 255-267, **2013**.
38. **W Mo**, Q Zhang, "Can Municipal Wastewater Treatment Systems Be Carbon Neutral?" *Journal of Environmental Management*, 112, 360-367, **2012**.
39. **W Mo**, Q Zhang, R Wang, "Energy Embodiment of Water Supply: A Comparison between the US and China," *Advanced Materials Research*, 356-360, 2175-2181, **2012**.
40. **W Mo**, Q Zhang, JR Mihelcic, D Hokanson, "Embodied Energy Comparison of Surface Water and Groundwater Supply Options," *Water Research*, 45:17, 5577-5586, **2011**.
41. **W Mo**, F Nasiri, MJ Eckelman, Q Zhang, JB Zimmerman, "Measuring the Embodied Energy in Drinking Water Supply Systems: A Case Study in The Great Lakes Region," *Environmental Science & Technology*, 44:24, 9516-9521, **2010**.

NON-REFEREED JOURNAL PAPERS

42. Q Zhang, **W Mo,** "Embodied Energy and Carbon Footprint Benefits of Water Reclamation," *World Water: Water Reuse & Desalination*, 3:1, 29-30, **2012**.

REFEREED CONFERENCE PROCEEDINGS

1. KE Haslett, E Dave, **W Mo**, "Impacts of Climate-Change and Realistic Traffic Conditions on Asphalt Pavement and Rehabilitation Decisions using Life Cycle Assessment", *Proceedings of the International Symposium on Pavement, Roadway, and Bridge Life Cycle Assessment*, accepted, 2020.

2. C DeCarlo[1], **W Mo**, EV Dave, and J Locore[1], "Sustainable Pavement Rehabilitation Strategy using Consequential Life Cycle Assessment: An Example of Interstate 95," Proceedings of BCRRA 2017, *Tenth International Conference on the Bearing Capacity of Roads, Railways and Airfields*, June 28-30, Athens, Greece, 2017.
3. O Valle[2], Y Qiao, EV Dave, and **W Mo**, "Life Cycle Assessment of Pavements Under a Changing Climate," *Pavement Life-Cycle Assessment* (Eds. Al-Qadi, Ozer and Harvey), ISBN: 978-1-138-06605-2, CRC Press, pp. 241-250, 2017. http://dx.doi.org/10.1201/9781315159324-25
4. **W Mo**, Q Li, Q Zhang, "The Optimal Design of Water Supply Systems for Energy Efficiency," *Proceedings of IIE Annual Conference & Expo 2013*, May 18-23, San Juan, Puerto Rico, 2013.
5. **W Mo**, Q Zhang, R Wang. "Energy Embodiment of Water Supply: A Comparison between the US and China," 09/01/2011-08/31/2012, Proceedings of EESD 2011, *International Conference on Energy, Environment and Sustainable Development, 2011*, Shanghai, China, October 21-23, 2011.
6. **W Mo**, Q Zhang, JR Mihelcic, D Hokanson, "Embodied Energy Model on Water Supply Systems in Great Lakes Region," Proceedings of WEFTEC 2009, *The 82nd Annual Water Environment Federation Technical Exhibition and Conference*, October 10-14, Orlando, Florida, 2009.

BOOK CHAPTER

1. N Diaz-Elsayed, **W Mo**, Q Zhang, "The Sustainability Dimensions of Resource Recovery from "Wastewater"", book chapter in "Resource Recovery from Wastewater" (V. G. Gude), Apple Academic Press/CRC Press, 2021.

INVITED PRESENTATIONS

1. "Decentralized Urban Water Systems for Enhanced Water and Energy Security", *International Symposium Towards Urban Sustainability*, University of Tennessee, Knoxville, November 2021.
2. "Converging on Water Infrastructure Sustainability: Spatial Design of Urban Decentralized Water Systems Considering Consumer Preferences", *Saint Louis University*, October 2021.
3. "Rendezvous for Sustainability: Creating space for science-based collaborative solutions", with Catherine Ashcraft, *University of Maine*, September 2021.
4. "Participatory Modeling, Gaming, and Crowdsourcing for Addressing Environmental Engineering Challenges", *University of South Florida*, April 2021.
5. "The Energy Implication of Decentralization and Climate Change on Urban Water Services", *American Society of Civil Engineers Women-Water Nexus Conference*, September 2020.
6. "Sustainable Integration of Decentralized Infrastructure Systems into the Existing Centralized Network", *University of Massachusetts, Lowell*, postponed.
7. "Life Cycle Assessment of Municipal Drinking Water Systems", *Eastern Research Group, Inc., Lexington, Massachusetts*, December 2018.
8. "Integrated Design of Urban Centralized and Decentralized Water Systems for Sustainability and Resiliency", *National Science Foundation Critical Resilient Interdependent Infrastructure Systems and Processes (CRISP) Program PI workshop*, George Mason University, December 2018.
9. "Strengthening the Scientific Basis for Decision Making About Dams", *China-US 2018 Joint Symposium of Advances in Critical Needs for the Nexus of Food, Energy, and Water Systems*, Jiangsu, China, October 2018.
10. "Sustainable Design of Urban Decentralized Water and Energy Systems", *China-US 2018 Joint Symposium of Advances in Critical Needs for the Nexus of Food, Energy, and Water Systems*, Jiangsu, China, October 2018.
11. "Spatial and Dynamic Analyses of Water's Dependence on Energy", *Tennessee Tech University*, November 2016.
12. "Can Municipal Wastewater Treatment Systems Be Energy Neutral?", the 7th Annual Water

[1] Uundergraduate students co-advised by Dr. Eshan Dave and me.
[2] Summer Sustainability Fellow (2016) at UNH co-advised by Dr. Eshan Dave and me.

Symposium, *Tufts University*, Medford, Massachusetts, April 2016.

13. "Considering Time in Water-Energy Nexus Analyses - A Dynamic Life Cycle Framework", ERG Research Seminar, *University of New Hampshire*, Durham, New Hampshire, December 2014.
14. "Understanding Water's Dependence on Energy for Adaptive Water and Energy Management", NRESS Research Seminar, *University of New Hampshire*, Durham, New Hampshire, October 2014.
15. "Water-Energy Nexus: Analysis of Embodied Energy in Water and Wastewater Systems", Research Seminar, *Northeastern University*, Boston, Massachusetts, July 2014.
16. "Water's Dependence on Energy: An Analysis of Embodied Energy in Water Systems", Graduate Research Seminar, *University of Exeter*, Exeter, UK, March 2012.
17. "Combined Cost-Embodied Energy Modeling for Water Systems", Research Seminar, *Tongji University*, Shanghai, China, May 2011.

CONFERENCE PODIUM PRESENTATIONS

(Student/postdoc co-authors that I advised/co-advised are underlined.)

1. R Ghasemi, M Wosnik, **W Mo**, "Multi-objective optimization of a microgrid for an islanded community", *The 29th annual conference of the International Symposium on Sustainable Systems and Technology (ISSST)*, Pittsburg, Pennsylvania, June 21-23, 2022
2. TS Bixler, RM Collins, **W Mo**, "A Dynamic Life Cycle Assessment of Drinking Water Emergencies and Countermeasures" *Civil and Environmental Engineering Alumni Conference*, April 28, Durham, New Hampshire, 2022.
3. TS Bixler, C Song, **W Mo**, "Sustainability advantage of treating PFAS at POU vs. Centralized Treatment" *Water Quality Association Convention and Exposition*, April 6-8, Orlando, Florida, 2022.
4. TS Bixler, C Song, **W Mo**, "A Comparative Analysis of Per- and Polyfluoroalkyl Substance Treatment Options", *The 2021 Water Quality Technology Conference (WQTC)*, November 7-10, Tacoma, Washington, 2021.
5. M Khalkhali, B Dilkina, **W Mo**, "Energy implications of urban water services under decentralization and climate change", *The 2021 INFORMS Annual Meeting*, October 24-27, Anaheim, California, 2021.
6. M Khalkhali, B Dilkina, **W Mo**, "Maximizing Sustainability and Resilience Metrics of Decentralized Water System Adoption Configurations through Multi-Objective Spatial Optimization", *The 2021 INFORMS Annual Meeting*, October 24-27, Anaheim, California, 2021.
7. M Ren, R Ghasemi, M Khalkhali, **W Mo**, "Spatial and temporal impact of residential solar photovoltaics-battery (PV-battery) adoptions", *The 29th annual conference of the International Symposium on Sustainable Systems and Technology (ISSST)*, June 21-25, Virtual, 2021.
8. Y Li, M Khalkhali, **W Mo**, Z Lu, "Integrated Agent-based and System Dynamics Modeling of the Spatial Diffusion of Home-based Decentralized Water Technologies and the Impacts on the Water Supply System", *The 29th annual conference of the International Symposium on Sustainable Systems and Technology (ISSST)*, June 21-25, Virtual, 2021.
9. M Khalkhali, **W Mo**, "Energy implication of future urban water services under climate change and decentralization scenarios", *The 28th annual conference of the International Symposium on Sustainable Systems and Technology (ISSST)*, May-June, Virtual, 2020.
10. C Song, **W Mo**, J Zydlewski, A O'Malley, "Balancing fish-energy-cost tradeoffs through strategic basin-wide dam management', *The 28th annual conference of the International Symposium on Sustainable Systems and Technology (ISSST)*, May-June, Virtual, 2020.
11. M Ren, **W Mo**, "System Dynamics Modeling of Residential Solar Photovoltaic-Battery Systems' Life Cycle Economic and Environmental Influence under Battery Control Strategies and Solar Tariffs", *The 28th annual conference of the International Symposium on Sustainable Systems and Technology (ISSST)*, May-June, Virtual, 2020.
12. KE Haslett, E Dave, **W Mo**, "Impacts of Climate-Change and Realistic Traffic Conditions on Asphalt Pavement and Rehabilitation Decisions using Life Cycle Assessment", *International Symposium on Pavement, Roadway, and Bridge Life Cycle Assessment*, January 13-15, Davis, California, 2021.

13. N Leuchanka, C Song, C Ashcraft, **W Mo**, "Acting and Modeling the Future of Dams: Science-Based Role-Play Simulations as Mechanisms for Learning and Natural Resource Planning", *The American Association of Geographers Annual Meeting*, April 7-11, Virtual, 2020.
14. C Song, **W Mo**, "Balancing hydropower, fish population and biodiversity through participatory system dynamics modeling", *The 27th annual conference of the International Symposium on Sustainable Systems and Technology (ISSST)*, June 22-25, Portland, Oregon, 2019.
15. **W Mo**, Z Lu, B Dilkina, K Gardner, J Huang, "Do Decentralized Water Supply Systems Enhance Urban Sustainability?", *Institute of Industrial and Systems Engineers (IISE) Annual Conference*, May 18-21, Orlando, Florida, 2019.
16. **W Mo**, Z Lu, B Dilkina, K Gardner, J Huang, "Sustainable Integration of Urban Decentralized Water Systems into the Centralized Network", *AEESP 2019, The 18th Biannual Association of Environmental Engineering and Science Professors Education & Research Conference*, May 14-16, Tempe, Arizona, 2019.
17. C Ashcraft, N Leuchanka, **W Mo**, C Song, "Science-based Role-play Negotiation: Integrating knowledge and boundaries across researchers and stakeholders for sustainability science", *The American Association of Geographers Annual Meeting*, April 3-7, Washington, DC, 2019.
18. S Jakositz, **W Mo**, S Greenwood, B McGreavy, J Malley, "When money doesn't matter – Exploring motivations for citizen science", *2019 Citizen Science Association Conference (CitSci2019)*, March 13-17, Raleigh, North Carolina, 2019.
19. C Song, **W Mo**, "System dynamics modeling of energy and fish tradeoffs under various dam decision scenarios", *The 26th annual conference of the International Symposium on Sustainable Systems and Technology (ISSST)*, June 25-28, Buffalo, New York, 2018.
20. M Khalkhali, **W Mo**, "Dynamic LCA of Operation of Water Supply and Wastewater Treatment Process and the Existing Tradeoffs", *The 26th annual conference of the International Symposium on Sustainable Systems and Technology (ISSST)*, June 25-28, Buffalo, New York, 2018.
21. K Gardner, **W Mo**, Z Lu, B Dilkina, J Huang, MC Forman, "Modeling of the Resilience and Sustainability of Urban Water Supply and Treatment at the Infrastructure-Human-Resource Nexus", *2018 WE&RF Research Conference*, May 7-8, Atlanta, GA, 2018
22. B McGreavy, T Quiring, S Roy, KA Wilson, S de Souza, D Hart, K Gardner, C Druschke, CA Ashcraft, S Fultineer, J Jansujwicz, S Klein, **W Mo**, E Vogler, A Gold, E Uchida, "How do we decide what to do with dams? Dynamic Design Planning (DDP) to shape collaboration for sustainability science," *Resilience 2017: Resilience Frontiers for Global Sustainability Conference*, August 20-23, Stockholm, Sweden, 2017.
23. M Aghababaei, **W Mo**, "Life cycle environmental and economic performances of urine diversion practices in the Rich Earth Institute," Urine Summit, Rich Earth Institute, August 17-18, Brattleboro, Vermont, 2017.
24. M Khalkhali, **W Mo**, "Modeling Water Supply and Hydropower Generation Tradeoffs of the Massachusetts Water Resources Authority", *The 9th biennial conference of the International Society for Industrial Ecology (ISIE) and the 25th annual conference of the International Symposium on Sustainable Systems and Technology (ISSST)*, June 25-29, Chicago, Illinois, 2017.
25. C Song, **W Mo**, K Gardner, S Klein, SP de Souza, "Understanding the Cradle-to-Grave Greenhouse Gas Emissions of Dams", *AEESP 2017, The 17th Biannual Association of Environmental Engineering and Science Professors Education & Research Conference*, June 20-22, Ann Arbor, Michigan, 2017.
26. C Li, H Shi, Y Mu, L Li, J Gao, S Tabassum, Z Zhang, A Hao, **W Mo**, W Wu, "Scale-up of Ecological Dam for *in situ* Aquaculture Pollution Control on Yangcheng Lake: Design and Evaluation," *2017 IWA Symposium of Lake and Reservoir Management*, Shanghai, China, May 22-26, 2017.
27. C DeCarlo, J Locore, **W Mo**, EV Dave, "Sustainable Pavement Rehabilitation Strategy using Consequential Life Cycle Assessment: An Example of Interstate 95," Tenth International Conference on the Bearing Capacity of Roads, Railways and Airfields, June 28-30, Athens, Greece, 2017.

28. CA Ashcraft, **W Mo**, N Leuchanka, C Song, "System Dynamics and Role-Play Simulations: Acting and Modeling to Co-Produce Knowledge," *American Association of Geographers Annual Meeting*, April 5-9, Boston, Massachusetts, 2017.
29. O Valle, Y Qiao, EV Dave, **W Mo**, "Life Cycle Assessment of Pavements under a Changing Climate," *Pavement Life-Cycle Assessment Symposium 2017*, April 12-13, Champaign, Illinoi, 2017.
30. SP de Souza, K Gardner, **W Mo**, C Song, S Smith, "Sediments Can Represent an Alarming Source of GHG Emissions in the Decommissioning of Dams," *Society of Ecological Restoration New England Regional Conference*, October 14-15, Durham, New Hampshire, 2016.
31. **W Mo**, "Understanding the Influence of Climate Change on Energy Usage in Water Supply and Treatment," *ACE 2016*, Annual Conference & Exposition of American Water Works Association, June 19-22, Chicago, Illinois, 2016.
32. **W Mo**, J Jacobs, "Climate-Water-Energy nexus: Influence of Climate Change on the Embodied Energy of Water Supply," *AEESP 2015, The 16th Biannual Association of Environmental Engineering and Science Professors Education & Research Conference*, June 13-16, New Haven, Connecticut, 2015.
33. **W Mo**, "Understanding Water's Dependence on Energy for Adaptive Water and Energy Management", *CESF 2015, Chinese Environmental Scholars Forum*, May 30-31, New Haven, Connecticut, 2015.
34. J Jacobs, N Thomas, **W Mo**, P Kirshen, E Douglas, J Daniel, E Bell, L Friess, R Mallick, J Kartez, K Hayhoe, S Croope, "Explorations Around "Graceful Failure" in Transportation Infrastructure: Lessons Learned By the Infrastructure and Climate Network (ICNet)," *American Geophysical Union Fall Meeting*, December 15-19, San Francisco, California, 2014.
35. **W Mo**, R Wang, JB Zimmerman, "Water-Energy Nexus: Implications of Sustainable Water Management in Coastal Regions under Rising Water Scarcity," *Nexus 2014: Water, Food, Climate, and Energy conference*, March 5-8, Chapel Hill, North Carolina, 2014.
36. **W Mo**, Q Li, Q Zhang, "The Optimal Design of Water Supply Systems for Energy Efficiency," *Proceedings of IIE Annual Conference & Expo 2013*, May 18-23, San Juan, Puerto Rico, 2013.
37. Q Zhang, **W Mo**, "Embodied Energy and Carbon Footprint Benefits of Water Reuse", *2011 Portable Reuse Conference*, November 13-15, Hollywood, Florida, 2011.
38. Q Li, **W Mo**, Q Zhang, "The Optimal Design of Water Supply Systems for Energy Efficiency," *AEESP 2011, The 14th Biannual Association of Environmental Engineering and Science Professors Education & Research Conference*, July 10-12, Tampa, Florida, 2011.
39. Q Zhang, **W Mo**, JR Mihelcic, D Hokanson, "Embodied Energy of Water Supply Systems," *ISIE 2011, The 6th International Conference on Industrial Ecology,* June 7-10, Berkeley, California, 2011.
40. **W Mo**, Q Zhang, JR Mihelcic, D Hokanson, "Embodied Energy Model on Water Supply Systems in Great Lakes Region," *WEFTEC 2009, The 82nd Annual Water Environment Federation Technical Exhibition and Conference*, October 10-14, Orlando, Florida, 2009.

CONFERENCE POSTER PRESENTATIONS

(Student/postdoc co-authors that I advised/co-advised are underlined.)

1. R Ghasemi, M Wosnik, W Mo, "Multi-objective optimization of a microgrid for an islanded community", *AEESP 2022, Biannual Association of Environmental Engineering and Science Professors Education & Research Conference*, June 28-30, St. Louis, Missouri, 2022
2. R Ghasemi, Y Li, Z Lu, J Huang, W Mo, "Household preferences of decentralized solar photovoltaic and thermal systems", *AEESP 2022, Biannual Association of Environmental Engineering and Science Professors Education & Research Conference*, June 28-30, St. Louis, Missouri, 2022
3. TS Bixler, C Song, **W Mo**, "A Comparative Analysis of Centralized and Point of Use Treatment of Per- and Polyfluoroalkyl Substances" *Out in Science Technology Engineering and Mathematics (oSTEM) Conference 2021*, October 28-30, Virtual, 2021.
4. M Khalkhali, B Dilkina, **W Mo**, "Multi-objective spatial optimization of decentralized water systems adoption for enhanced sustainability and resiliency", *The 29th annual conference of the International Symposium on Sustainable Systems and Technology (ISSST)*, June 21-25, Virtual, 2021.

5. S Jakositz, **W Mo**, S Greenwood, B McGreavy, J Malley, "A Contest-Based Crowdsourcing Scheme to Engage Citizens for Household Water Quality Monitoring", *AEESP 2019, The 18th Biannual Association of Environmental Engineering and Science Professors Education & Research Conference*, May 14-16, Tempe, Arizona, 2019.
6. C Song, **W Mo**, A Omalley, S Roy, J Zydlewski, B Barber, "Managing dams for energy, fish, and cost tradeoffs: what does a win-win solution take?" *AEESP 2019, The 18th Biannual Association of Environmental Engineering and Science Professors Education & Research Conference*, May 14-16, Tempe, Arizona, 2019.
7. N Leuchanka, C Song, C Ashcraft, **W Mo**, "Role-play simulations and system dynamics for sustainability solutions around dams in New England", *AEESP 2019, The 18th Biannual Association of Environmental Engineering and Science Professors Education & Research Conference*, May 14-16, Tempe, Arizona, 2019.
8. S Jakositz, **W Mo**, S. Greenwood, B. McGreavy, J. Malley, "A Contest-Based Crowdsourcing Scheme to Engage Citizens for Household Water Quality Monitoring", *New England Water Works Association Spring Conference*, April 1-2, Worcester, Massachusetts, 2019.
9. S Stang, **W Mo**, "Modelling Decentralized Water Systems for Optimization", *New England Water Works Association Spring Conference*, April 1-2, Worcester, Massachusetts, 2019.
10. S Greenwood, S Jakositz, B McGreavy, **W Mo**, "A Contest-Based Crowdsourcing Scheme to Monitor Household Water Quality", New Hampshire Water & Watershed Conference, March 15, Plymouth, New Hampshire, 2019.
11. **W Mo**, PK Cornejo, J Malley, TE Kane, MR Collins, "Life Cycle Environmental and Economic Assessment of Disinfection Byproduct Reduction Techniques in Small Drinking Water Systems", *2018 Water Quality Technology Conference (WQTC 18)*, November 11-15, Toronto, Canada, 2018.
12. **W Mo**, S Jakositz, S Greenwood, B McGreavy, J Malley, "A Contest-Based Crowdsourcing Scheme to Engage Citizens for Household Water Quality Monitoring", *2018 Water Quality Technology Conference (WQTC 18)*, November 11-15, Toronto, Canada, 2018.
13. M Ren, **W Mo**, "Dynamic Environmental and Economic Assessment and Optimization of Grid-Connected Household Solar Photovoltaic (PV) Systems", *The 26th annual conference of the International Symposium on Sustainable Systems and Technology (ISSST)*, June 25-28, Buffalo, New York, 2018.
14. E Roy, L Bomeisl, P Cornbrooks, **W Mo**, "An integrated decision support system for wastewater nutrient recovery and recycling to agriculture," *American Geophysical Union Fall Meeting*, December 11-15, New Orleans, 2017.
15. M Khalkhali, **W Mo**, "System Dynamics Modeling of Water Supply and Hydropower Generation Tradeoffs", *The 35th International Conference of the System Dynamics Society*, July 16-20, Cambridge, Massachusetts, 2017.
16. C Song, **W Mo**, A O'Malley; J Zydlewski, "Understanding the Tradeoffs of Dam Decision-Making by System Dynamics Modeling", *The 35th International Conference of the System Dynamics Society*, July 16-20, Cambridge, Massachusetts, 2017.
17. C Song, **W Mo**, K Gardner, "System Dynamics Modeling of Water Availability and Hydropower Generation Tradeoffs under Various Dam Decision-Making Scenarios", *AEESP 2017, The 17th Biannual Association of Environmental Engineering and Science Professors Education & Research Conference*, June 20-22, Ann Arbor, Michigan, 2017.
18. M Aghababaei, **W Mo**, "Life Cycle Assessment of Current Urine Diversion Practice by the Rich Earth Institute," Graduate Research Conference, University of New Hampshire, April 10-11, Durham, New Hampshire, 2017.
19. M Khalkhali, **W Mo**, "Modeling Water Supply and Hydropower Generation Tradeoffs of the Massachusetts Water Resources Authority," Graduate Research Conference, University of New Hampshire, April 10-11, Durham, New Hampshire, 2017.

20. C Song, K Gardner, S Klein, SP Souza, **W Mo**, "How Much Greenhouse Gases (GHGs) Does a Dam Emit Over its Life Cycle?", *Society of Ecological Restoration New England Regional Conference*, October 14-15, Durham, New Hampshire, 2016.
21. C Song, **W Mo**, "Life Cycle Greenhouse Gas (GHG) Emissions of Various Types of Dams", ISSST 2016, *International Symposium on Sustainable Systems and Technology*, May 16-18, Phoenix, Arizona, 2016.
22. **W Mo**, H Wang, "Understanding the Influence of Climate Change on Municipal Water Supply Systems," *The 16th National Conference and Global Forum on Science, Policy and the Environment*, January 19-21, Washington DC, 2016.
23. **W Mo**, D Balen, M Moura, K Gardner, "Economic Growth and Environmental Impacts-A Life Cycle Perspective," *The 24nd National NSF EPSCoR Conference*, November 1-3, Portsmouth, New Hampshire, 2015.
24. **W Mo**, R Wang, JB Zimmerman, "Influence of Spatial Heterogeneity on the Environmental and Economic Performances of Enhanced Water Supply Scenarios," *NSF Food Energy Water Nexus Workshop*, October 19-20, Rapid City, South Dakoda, 2015.
25. E Garvey, **W Mo**, "Life Cycle Environmental and Cost Assessment of Multiple Water-Saving Technologies for Three U.S. Cities," *AEESP 2015, The 16th Biannual Association of Environmental Engineering and Science Professors Education & Research Conference*, June 13-16, New Haven, Connecticut, 2015.
26. K Santello, **W Mo**, "Life Cycle Assessment of Tourism Activities," *AEESP 2015, The 16th Biannual Association of Environmental Engineering and Science Professors Education & Research Conference*, June 13-16, New Haven, Connecticut, 2015.
27. S Jakositz, P Marciano, K Gardner, **W Mo**, "Life Cycle Environmental Impacts Associated with Timber Uses," *Undergraduate Research Conference*, April 22, Durham, New Hampshire, 2015.
28. D Balen, MO Moura, K Gardner, **W Mo**, "Dynamic Environmental Life Cycle Assessment of Economic Development in New Hampshire," *Undergraduate Research Conference*, April 22, Durham, New Hampshire, 2015.
29. K Santello, **W Mo**, "Life Cycle Assessment of Tourism Activities," *Undergraduate Research Conference*, April 22, Durham, New Hampshire, 2015.
30. **W Mo**, J Jacobs, "Assessing the Impacts of Climate Change on the Water-Energy Nexus," *American Geophysical Union Fall Meeting*, December 15-19, San Francisco, California, 2014.
31. Q Zhang, **W Mo**, J Downs, "Regional Embodied Energy for Water Supply: The Impacts of Water Source, Land Use and Population," *AEESP 2013, The 50th Anniversary Association of Environmental Engineering and Science Professors Education & Research Conference*, July 14-16, Golden, Colorado, 2013.
32. **W Mo**, Q Zhang, JR Mihelcic, "Embodied Energy Comparison of Groundwater and Surface Water Sourced Water Supply Systems," *3rd Annual Graduate Student Research Symposium,* Tampa, FL, October 14, 2010.
33. MM Ballard, KA FitzGerald, R Gyawali, **W Mo**, A Mayer, Q Zhang, D Watkins, and JR Mihelcic. "Modeling and analyzing the use, efficiency, value, and governance of water in the Great Lakes region through an integrated approach: An Update," Conference Abstract, Published Bibliography: International Association for Great Lakes Research, 53nd Annual Conference, May 2010, University of Toronto, Toronto, Canada, August 2010.
34. **W Mo**, Q Zhang, "Water Embodied in US Economic Sectors," *2nd UF Water Institute Symposium*, Gainesville, FL, February 24-25, 2010.
35. **W Mo**, Q Zhang, JR Mihelcic, D Hokanson, "Development and Application of an Embodied Energy Model for Individual Water Supply Systems," *2nd Annual USF College of Engineering Research Day*, Tampa, FL, October 7, 2009.
36. MM Ballard, KA FitzGerald, R Gyawali, **W Mo**, and E Satchell, "Modeling and Analyzing the Use Efficiency, Value, and Governance of Water in the Great Lakes Region through an Integrated

Approach: An Update," *the Sustainable Future Institute Poster Session*, Michigan Technological University, Houghton, MI, June 16, 2009.

37. **W Mo**, Q Zhang, "Embodied Energy Model on Water Systems in Great Lakes Region," *World Water Day Poster*, Michigan Technological University, Houghton, MI, March 23, 2009.

EXTERNAL GRANTS

(*Total amount of funding: **$7,518,279**; total external grant dollars under my control: **$1,537,592***)

1. Completing Stream Crossing Assessments in the Merrimack and Salmon Falls Watersheds and Advancing Watershed Planning to Support Aquatic Connectivity and Flood Resiliency, **New Hampshire Department of Environmental Services**, PI (with Erin Bell), $315,834, 2022.
2. Collaborative Research: NNA Research: Change, Resilience, and Sustainability of Frozen Commons in Alaskan and Northeastern Siberian Communities, **National Science Foundation**, co-PI (lead PI: Vera Kuklina), $488,983, 2021.
3. Decision Theoretic Life Cycle Assessment, **National Science Foundation CAREER Award**, the Environmental Sustainability Program, single PI, $507,099, 2021.
4. Demonstrating Value of Improved Data Access to Support Basin-Wide River Planning Efforts: CERC 3.6, **Department of Energy**, UNH site PI (with collaborators from Stanford, University of Maine, PNNL, and ORNL), $100,000, 2020.
5. EAGER: PPER: Development of a Contest-based Crowdsourcing Scheme for Public Water Quality Monitoring, **National Science Foundation CBET Program**, PI (co-PIs: Bridie McGreavy and James Malley), $100,000, 2018.
6. Resilience, Reliability, and Externalities of Integrated Centralized and Distributed Water and Energy Systems: The Integrated Water-Energy Dynamic (iWED) Model, **National Science Foundation CBET Program**, PI (co-PI: Kevin Gardner), $303,680, 2017.
7. Sustainability through Enhanced Nutrient Recovery and Community Engagement in Durham, NH, **New Hampshire Sea Grant**, PI (co-PI James Houle), $7,500, 2016.
8. CRISP Type 1/Collaborative Research: Sustainable and Resilient Design of Interdependent Water and Energy Systems at the Infrastructure-Human-Resource Nexus, **National Science Foundation CRISP Program**, lead PI (co-PIs: Bistra Dilkina, Zhongming Lu, Kevin Gardner, Ju-Chin Huang), $500,000 ($252,938 for the UNH site), 2016.
9. RII Track-2 FEC: Strengthening the Scientific Basis for Decision Making About Dams: Multi-Scale, Coupled-Systems Research on Ecological, Social, and Economic Trade-offs, **National Science Foundation EPSCoR Program**, Senior Personnel (lead PIs: Kevin Gardner, David Hart, Art Gold), $6,000,000, 2015.

INTERNAL GRANTS

10. Agent-based Traffic Flow Model for Transportation LCA, **UNH Sustainability Institute**, co-PI, $6,000, 2018.
11. Sustainable Pavement Designs using Life Cycle Assessment with Climate Change Inputs, **UNH Sustainability Institute**, co-PI, $6,000, 2016.

COURSES TAUGHT

CEE 520 Environmental Pollution and Control: A Global Context, 4 credits, lower undergraduate level
Spring 2018-2022

CEE 706/806 Environmental Life Cycle Assessment, 3 credits, upper undergraduate and graduate level
Spring 2015-2017, 2019, 2021

CEE 721/821 Environmental Sampling and Analysis, 4 credits, upper undergraduate and graduate level
Fall 2016, 2018-2021

CEE 907 Systems Analysis of the Environment, 3 credits, graduate level
Fall 2014, 2015, Spring 2017, 2020

CEE 799H Senior Honors Thesis, senior level
Spring 2015, 2018, 2022

ADVISING AND MENTORING

Postdoc

1. Cuihong Song, May 2020 – June 2021, currently: postdoc at Princeton University

PhD Students

1. Sabastian Rowan, September 2022 - present
2. Koorosh Asadifakhr, August 2022 - present
3. Shima Kheirinejad, August 2022 - present
4. Roozbeh Ghasemi, August 2020 - present
5. Jingyan Huang, August 2020 - present
6. Taler Bixler, May 2018 – present, expected May 2022
7. Mingcheng Ren, August 2016 – October 2021, currently: New Mexico Environment Department
8. Masoumeh Khalkhali, January 2016 – August 2020, currently: Hazen and Sawyer
9. Cuihong Song, August 2015 - May 2020

MS Students (thesis option)

1. Danyi Feng, January 2019 – December 2020, currently: PhD student at University of Wisconsin, Madison
2. Rebecca Maskwa, May 2020, currently: Wood Group
3. Shannon Stang, August 2018 - May 2020, currently: Woodard & Curran
4. Sarah Jakositz, August 2018 - December 2019, currently: CDM Smith
5. Taler Bixler, August 2016 - May 2018, currently: PhD student at UNH

MEng Students (non-thesis option)

1. Charlie Xue, August 2020 – present
2. Mi Zhou, August 2019 – August 2021
3. Hui Guo, August 2015 - May 2018

Funded Undergraduate Students

1. Sara Berg, Fall 2021 and Spring 2022
2. Megan Cramton, fall 2021-present
3. Katie O'Brien, spring 2021, fall 2021-present
4. Isabel (Izzy) Medeiros, summer 2021-present
5. Kushum Basnet, summer 2021-present
6. August Murray, summer 2021-present
7. Madeline Strange, summer 2020
8. Sunjay Sood, spring and summer 2020
9. Giovanni Guglielmi, 2019-2021
10. Lana Pillsbury, 2018-2019
11. Shannon Stang, 2016-2018
12. Alexa Kaminski, 2017
13. Emily Cook, 2017
14. Sarah Jakositz, 2015-2016
15. Pia K Marciano, 2015-2016
16. Darline Balen, 2016-2017
17. Marianna Oliveira Moura, 2016-2017
18. Kayla N Santello, 2015-2016
19. Elizabeth R Garvey, 2015
20. Matthew J McGinnis, 2014-2015

K-12 Teachers

1. Kaela Plante, summer 2018
2. Kacie Ferraro, summer 2016
3. Kate Dusinberre, summer 2016
4. Shani Scarponi, summer 2015

MEMBERSHIP AND COMMITTEES

American Water Works Association
Water Resources Planning & Management Committee
System Dynamics Society
Association of Environmental Engineering & Science Professors
International Society of Industrial Ecology

JOURNAL REVIEW

Environmental Science & Technology; Environmental Science & Technology Letters; Water Research; Science of the Total Environment; Journal of Environmental Management; Journal of Cleaner Production; Journal of Renewable and Sustainable Energy; Resources, Conservation & Recycling; Stochastic Environmental Research and Risk Assessment; Water Resources Management; Industrial & Engineering Chemistry Research; Materials; Environmental Science and Engineering

PROPOSAL REVIEW

Environmental Research & Education Foundation
Foundation for Food and Agriculture Research
NOAA Sea Grant
NSF CBET, CMMI, INFEWS, CoPe

CONFERENCE/WORKSHOP ORGANIZER

- Program co-chair, the 30th annual conference of the International Symposium on Sustainable Systems and Technology (ISSST), 2022.
- Keynote co-chair, the 29th annual conference of the International Symposium on Sustainable Systems and Technology (ISSST), June, Virtual, 2021.
- Co-chair of the critical interdependent infrastructure systems theme, the 28th annual conference of the International Symposium on Sustainable Systems and Technology (ISSST), May-June, Virtual, 2020.
- Co-chair of the food-energy-water nexus systems theme, the 27th annual conference of the International Symposium on Sustainable Systems and Technology (ISSST), June 25-27, Portland, Oregon, 2019.
- Workshop co-organizer, the Future of Dams Negotiation Simulation Workshop, 25 stakeholder participants, Manchester, New Hampshire, May 31, 2019.
- Workshop co-organizer, the Future of Dams Negotiation Simulation Workshop, 7 stakeholder participants, Rhode Island, May 29, 2019.
- Workshop co-organizer, workshop titled "Science-Based Role Play Simulation for Engaged Decision Making – A Dam Negotiation Application" at the *18th Biannual Association of Environmental Engineering and Science Professors Education & Research Conference*, May 14-16, Tempe, Arizona, 2019.
- Workshop co-organizer, the Future of Dams Negotiation Simulation Workshop, 35 stakeholder participants, Manchester, New Hampshire, January 14, 2019.
- Workshop co-organizer, the Future of Dams Negotiation Simulation Workshop, 10 stakeholder participants, Rhode Island, January 16, 2019.

CONFERENCE ABSTRACT REVIEWER

- The 28th annual conference of the International Symposium on Sustainable Systems and Technology (ISSST), May-June, Virtual, 2020
- The 27th annual conference of the International Symposium on Sustainable Systems and Technology (ISSST), June 25-27, Portland, Oregon, 2019.
- The 26th annual conference of the International Symposium on Sustainable Systems and Technology (ISSST), June 25-28, Buffalo, New York, 2018.
- The 9th biennial conference of the International Society for Industrial Ecology (ISIE) and the 25th annual conference of the International Symposium on Sustainable Systems and Technology (ISSST), June 25-29, Chicago, Illinois, 2017.

SESSION CHAIR/MODERATOR

- Session moderator, Integrated Planning in Action: Long-Term Resiliency Session, AWWA Virtual Summit, February 2021.
- Session moderator, the 28th annual conference of the International Symposium on Sustainable Systems and Technology (ISSST), May-June, Virtual, 2020.
- Session moderator, the 27th annual conference of the International Symposium on Sustainable Systems and Technology (ISSST), June 25-27, Portland, Oregon, 2019.
- Session moderator, the 26th annual conference of the International Symposium on Sustainable Systems and Technology (ISSST), June 25-28, Buffalo, New York, 2018.
- Rapporteur for the NSF Workshop for Developing Evaluation Metrics to Advance a National Water Resource Recovery Facility Test Bed Network, May 2016.

JOURNAL EDITING

- Associate Editor, AWWA Water Science, 2020 - present
- Co-Guest Editor with Q. Zhang, M. Arias, Z. Lu, S. Mohebbi, *Journal of Environmental Engineering*, Special Issue, "Integrative Analysis and Modeling of Interdependent Systems", 2021.
- Co-Guest Editor with K. Gardner, *Sustainability*, Special Issue, "Sustainable Environmental Engineering: Critical, Interdependent Infrastructure Sustainability and Resilience", 2018.

UNIVERSITY/COLLEGE SERVICES

- Co-lead, CEPS junior faculty lunch meetings, 2019-2020
- Faculty Marshal, Honors Convocation, 2016, 2017, 2018, 2019

DEPARTMENTAL SERVICES

- Graduate co-coordinator, 2021-present
- Environmental Engineering honors coordinator, 2019-present
- Faculty Search Committee, 2016-2017, 2019-2020
- Admitted Student Visit Days, program lead, Spring 2018, 2019, 2020
- Environmental Engineering Curriculum Planning Committee, 2017-2018
- Faculty meeting scribe, 2014-2018
- Writing up the report for the ABET employer and alumni surveys for the environmental engineering program, 2017
- Visiting student meetings, 2015-2017
- Summer freshmen orientation, student registration mentor, summer 2015, 2017, 2018, 2019, 2020
- Judge for UNH Undergraduate Research Conference, 2015, 2017
- Invited and hosted five speakers from University of Vermont (1 person), University of Michigan (1 person), University of Massachusetts Lowell (1 person), and University of New Hampshire (2 persons) for the ASCE Seminar and the Environmental Research Group Seminar Series, 2014-2018
- EWRI research panel member, November 2014