

MAURA C. ALLAIRE

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EDUCATION

Columbia University		2015- 2017
Post-Doctorate, Earth Institute		
University of North Carolina at Chapel Hill		
Ph.D.	Environmental Management and Policy Department of Environmental Sciences and Engineering	2015
Tufts University		
B.S.	Economics, <i>summa cum laude</i>	2006
B.S.	Geology, <i>summa cum laude</i>	2006

PROFESSIONAL APPOINTMENTS

Arizona State University,		
<i>Assistant Professor</i> , School of Geographical Sciences and Urban Planning		2024 - present
<i>Senior Global Futures Scientist</i> , Global Futures Laboratory		2024 - present
University of California, Irvine, Department of Urban Planning and Public Policy		
<i>Associate Professor, tenured</i>		2023 - 2024
<i>Assistant Professor</i>		2017 - 2023

PUBLICATIONS

Peer-Reviewed Journal Articles

- J27 Lee, J., Nemati, M., **Allaire, M.**, Dinar, A. (2024). The Impact of Pricing Structure Change on Residential Water Consumption: A Long-Term Analysis of Water Utilities in California. *Water Resources and Economics*. 46: 100240.
- J26 Muller, M., Rusca, M., Bertassello, L, Adams, E., **Allaire, M.**, Villarejo, V., Levy, M, Mukherjee, J., Pokhrel, Y. (2024). Mapping the Landscape of Water and Society Research: Promising Combinations of Compatible and Complementary Disciplines. *WIREs Water*. 11(2) e1701.
- J25 Acquah, S. and **Allaire, M.** (2023). Disparities in Drinking Water Quality: Evidence from California. *Water Policy*. 25 (2): 69–86.
- J24 Schwetschenau, S., Kovankaya, Y., Elliott, M., **Allaire, M.**, White, K., Lall, U. (2023). Optimizing Scale for Decentralized Wastewater Treatment: A tool to address failing wastewater infrastructure in the United States. *ACS ES&T Engineering*. 3(1) 1-14.
- J23 Ulibarri, N., Valencia-Uribe, C., Sanders, B., Schubert, J., Matthew, R. Forman, F., **Allaire, M.**, Brady, D. (2023) Framing the problem of flood risk and flood management in Metropolitan Los Angeles. *Weather, Climate & Society*. 15(1) 45–58.
- J22 **Allaire, M.** (2022). Disaster Impacts and Adaptation: The Economics of Flooding [Editorial]. *Water Economics and Policy*. doi:10.1142/S2382624X22020015
- J21 **Allaire, M.** and Acquah, S. (2022). Disparities in Drinking Water Compliance: Implications for Incorporating Equity into Regulatory Practices. *AWWA Water Science*. 4(2)e1274.

- J20 Haraguchi, M., Nishino, A., Kodaka, A., **Allaire, M.**, Kuei-Hsien, L., Lall, U., Onda, K., Tsubouchi, K., Kohtake, N. (2022). Human Mobility Data and Analysis for Urban Resilience: A Systematic Review. *Environment and Planning B: Urban Analytics and City Science*. doi:10.1177/23998083221075634
- J19 **Allaire, M.** and Dinar, A. (2022). What Drives Water Utility Selection of Pricing Methods? Evidence from California. *Water Resources Management*. 36, 153-169.
- J18 Brand, M., Quesnel, K., Saksa, P., Ulibarri, N., Bomblies, A., Mandle, L., **Allaire, M.**, Wing, O., Tobin-de la Puente, J., Parker, E., Nay, J., Sanders, B., Rosowsky, D., Lee, J., Johnson, K., Gudino-Elizondo, N., Ajami, N., Wobbrock, N., Adriaens, P., Grant, S., Gartner, T., Knight, Z., Gibbons, J. (2021). Environmental Impact Bonds: A common framework and looking ahead. *Environmental Research: Infrastructure and Sustainability*. 1 (2021) 023001.
- J17 Quon, H. **Allaire, M.**, Jiang, S. (2021). Assessing the Risk of Legionella Infection through Showering with Untreated Rain Cistern Water in St. Thomas, Virgin Islands. *Water*. 13(7)889.
- J16 **Allaire, M.** (2020). Disparities in Disaster Assistance: A Comparison of the Social Benefits of Flood Insurance and Compensation. *Water Economics and Policy*. 6(4)1-47.
- J15 Brand, M., Gudino-Elizondo, N., **Allaire, M.**, Wright, S., Matson, W., Saksa, P., Sanders, B. (2020). Stochastic Hydro-financial Watershed Modeling for Environmental Impact Bonds. *Water Resources Research*. 56, e2020WR027328.
- J14 Fuente, D., **Allaire, M.**, Jeuland, M., Whittington, D. (2020). Forecasts of Mortality and Economic Losses from Poor Water and Sanitation in Sub-Saharan Africa. *PloS one*. 15(3) e0227611.
- J13 Sanders, B., Schubert, J., Karlin, B., Goodrich, K., Luke, A., Boudreau, D., Cheung, W., Conteras, S., Feldman, D., Houston, D., Basolo, V., **Allaire, M.**, Moftakhari, H., AghaKouchak, A., Matthew, R. (2020). Collaborative Modeling with Fine Resolution Data Enhances Flood Awareness, Minimizes Differences in Flood Perception, and Produces Actionable Flood Maps. *Earth's Future*. 8(1) e2019EF001391.
- J12 **Allaire, M.**, Mackay, T., Zheng, S., Lall, U. (2019). Detecting Community Response to Water Quality Violations Using Bottled Water Sales. *Proceedings of the National Academy of Sciences*. 116(42)20917-20922.
- J11 Josset, L, **Allaire, M.**, Hayek, C., Rising, J., Thomas, C., Lall, U. (2019). The USA Water Data Gap: A survey of online state-level water data platforms to inform the development of a national water portal. *Earth's Future*. 7(4) 433-449.
- J10 **Allaire, M.** (2018). Socio-Economic Impacts of Flooding: A Review of the Empirical Literature. *Water Security*. (3) 18-26.
- J9 Moftakhari, H., AghaKouchak, A., Sanders, B., **Allaire, M.**, Matthew, R. (2018). What is Nuisance Flooding? Defining an Emerging Challenge Facing Coastal Regions. *Water Resources Research*. 54 (7) 4214-4227.
- J8 **Allaire, M.**, Wu, H., Lall, U. (2018). National Trends in Drinking Water Quality Violations. *Proceedings of the National Academy of Sciences*. 115 (9) 2078-2083.
- J7 Ho, M., Lall, U., **Allaire, M.**, Devineni, N., Kwon, H., Pal, I., Raff, D., Wegner, D. (2017). The Future Role of Dams in the United States of America. *Water Resources Research*. 53(2) 982–998.
- J6 **Allaire, M.** (2016). Disaster Loss and Social Media: Can Online Information Increase Flood Resilience? *Water Resources Research*. 52(9) 7408-7423.
- J5 **Allaire, M.** (2016). Using Practical and Social Information to Influence Flood Adaptation Behavior. *Water Resources Research*. 52(8) 6078-6093.

- J4 **Allaire, M.**, Kroll, C., Vogel, R. (2015). The Hydromorphology of an Urbanizing Watershed Using Multivariate Elasticity. *Advances in Water Resources*. (86)147-154.
- J3 **Allaire, M.** and Brown, S. (2015). The Green Paradox of U.S. Biofuel Subsidies: Impact on Greenhouse Gas Emissions. *Economics of Energy & Environmental Policy*. 4(2)83-102.
- J2 Nabangchang, O., **Allaire, M.**, Leangcharoen, P., Jarungrattanapong, R., Whittington, D. (2015). Economic Costs Incurred by Households in the 2011 Bangkok Flood. *Water Resources Research*. 51(1)58-77.
- J1 Jeuland, M., Fuente, D., Özdemir, S., **Allaire, M.**, and Whittington, D. (2013). The long-term dynamics of mortality benefits from improved water and sanitation in less developed countries. *PLoS one*. 8(10), e74804.

Special Journal Issues

- JE1 Allaire, M. (Guest Editor), Special Issue: Economics of Flooding. *Water Economics and Policy*, 8 (3), 2022.

Book Chapters

- BC2 Muller, M., Rusca, M., Adams, E., **Allaire, M.**, Blöschl, G., Villarejo, V., Dumas, M., Levy, M, Mukherjee, J., Rising, J. “Theoretical Frameworks on Water and Society”. In F. Tian (Ed.), *Coevolution and Prediction of Coupled Human-Water Systems*. Cambridge University Press. (Forthcoming)
- BC1 Jeuland, M., Fuente, D., Özdemir, S., **Allaire, M.**, and Whittington, D. (2013). Economic Losses from Poor Water and Sanitation: Past, Present, and Future. In B. Lomborg (Ed.), *How Much Have Global Problems Cost the World? A Scorecard from 1900 to 2050*. Cambridge University Press.

Books

- BE1 **Allaire, M.** (Editor), *Flooding: Public Policy and Economics Aspects*. World Scientific Publishers (*In progress*)

Technical Reports and Issue Briefs

- RR8 Hanak, E., Chappelle, C., Jezdimirovic, J., Gray, B., **Allaire, M.**, Green, S., Harter, T., Lund, J., Mitchell, D., Perrone, D. (2018). California’s Water: Providing Safe Drinking Water. PPIC Water Policy Center, San Francisco, CA
- RR7 Sadoff, C., Whittington, D. and **Allaire, M.** (2013). The Economic Value of Moving Toward a More Water Secure World. Global Water Partnership. TEC Background Paper No. 18.
- RR6 **Allaire, M.** and Brown, S. (2012). U.S. Energy Subsidies: Effects on Energy Markets and Carbon Dioxide Emissions. Pew Charitable Trusts. Washington, D.C. August 2012.
- RR5 **Allaire, M.** (2011). Global Successes – Water and Sanitation System Expansion. In *Cambodia Water Sector Review*. East Asia and Pacific Infrastructure Unit. World Bank. Washington, DC.
- RR4 Palmer, K., Sweeney, R., and **Allaire, M.** (2010). Modeling Policies to Promote Renewable and Low Carbon Sources of Electricity. Background Paper. Resources for the Future. Washington, D.C.
- RR3 Brown, S. and **Allaire, M.** (2009). An Economic Assessment of Eliminating Oil and Gas Company Tax Preferences. Testimony Prepared for a Hearing on Finance Subcommittee on Energy, Natural Resources and Infrastructure. Washington, D.C.
- RR2 **Allaire, M.** and Brown, S. (2009). Eliminating Subsidies for Fossil Fuel Production: Implications for U.S. Oil and Natural Gas Markets. Issue Brief. Resources for the Future. Washington, D.C.
- RR1 **Allaire, M.** (2009). Drought Mitigation in Semi-Arid Africa: The Potential of Small-Scale Groundwater Irrigation. SustainUS Citizen Science Paper.

Other Works

- C2 Dinar, A., Frisvold, G., Goetz, R., Luckmann, J., Wang, J., **Allaire, M.**, Schoengold, K., Jiang, Y. (2024). Reflection on the 10th Anniversary of the Journal Water Economics and Policy (WEP). *Water Economics and Policy*, 10:01.
- C1 Bing, Q. and **Allaire, M.** (2019). How to address America's lead crisis and provide safe drinking water for all. *The Conversation*. (Invited)
- O1 **Allaire, M.**, Nabangchang, O., Leangcharoen, P., Jarungrattanapong, R. and Whittington, D. (2012). Thailand's 2011 Floods. Teaching Case Study. Economy and Environment Program for Southeast Asia.

FELLOWSHIPS, HONORS AND AWARDS

- 2023-2025 **NSF NCAR Early Faculty Career Award**, Innovators Program
National Center for Atmospheric Research (NCAR) & National Science Foundation (NSF)
- 2020 **Fellow, Enabling the Next Generation of Hazards Researchers**
Early career mentorship program (NSF Award #1921157, Mentor: Abdul-Akeem Sadiq)
- 2020 **UCI Faculty Mentor of the Month**
Honor for mentoring undergraduate research, awarded by Vice Provost of Teaching and Learning
- 2018 **Best Paper Award**
From *Economics of Energy & Environmental Policy*, articles published 2012-2016
- 2017 **ADVANCE Career Development Award**
UC Irvine award to participate in the Faculty Success Program
- 2017 **Editor's Choice Finalist**
Paper award from the Yale Environment Review
- 2016 **Best Paper Award**
From the International Conference on Sustainable Development, Columbia University
- 2011-2015 **Graduate Research Fellowship**, National Science Foundation
Tuition support and stipend
- 2014 **Outstanding Student Paper Award**
American Geophysical Union Fall 2014 Meeting
- 2014 **P.E.O. Scholar Award**
One-year PhD scholarship
- 2013 **UNC Anne Cynthia Price Travel Award**
University of North Carolina (UNC) conference travel support
- 2011 **UNC Rotary Public Service Award & Entrepreneurial Public Service Fellowship**
Awards for community-based field work support
- 2010 **UNC Gillings Merit Award**
First-year graduate student stipend support
- 2009 **SustainUS Best Student Paper Award**
UN Commission on Sustainable Development 17th Session
- 2007 **GSA travel grant**
Award to attend the Geological Society of America (GSA) annual meeting
- 2006-2007 **Fulbright Scholar, Ghana**
One-year research award; host institution: International Water Management Institute

FUNDED RESEARCH

- Total grant funding since 2017 is \$18,572,160 (Allaire Group: \$1,555,667)
- 2024-27 U.S. EPA. *Innovative, Climate-resilient, and Cost-effective Decentralized Wastewater Treatment Systems and Management in Rural Unincorporated Communities in the Alabama Black Belt*, \$14,443,306 total; \$390,575 to ASU (Co-PI, PI: Amal Bakchan)
- 2023-25 NSF/NCAR. Early Career Faculty Innovator Program. *Advancing Equity in Wastewater Adaptation to Climate Change*. \$325,944 to ASU (PI), \$36,152 to UCI.
- 2022-25 NSF HEGS. *Drinking Water Governance, Equity, and Health*, \$351,229 total to UCI (PI)
- 2022-25 Columbia World Projects. *Addressing the Gap in Reliable, Affordable Wastewater Services to Protect Public Health*, \$1,700,000 total; \$209,255 to UCI (Co-PI, PI: Upmanu Lall)
- 2022 UCI School of Social Ecology, *Faculty Research Development Fund*, \$9,677 (PI)
- 2021-22 UC Office of the President, Multi-campus Research Programs and Initiatives. *California Informatics for Equitable Disaster Response and Recovery*, \$294,006 total; \$69,328 to UCI (Co-PI, PI: Henry Burton)
- 2020-21 Columbia World Projects. *Addressing the Gap in Reliable, Affordable Wastewater Services to Protect Public Health*, \$710,000 total; \$66,533 to UCI (Co-PI, PI: Upmanu Lall)
- 2020-21 California Institute for Water Resources. *Persistence of Rate Structure Effect on Water Consumption*, \$7,000 total (Co-PI, PI: Mehdi Nemati)
- 2020-22 NSF-Belmont Forum. *Data-driven Disaster Response Systems*, \$298,000 total (Collaborator, PI: Naohiko Kohtake)
- 2019-20 Mitigation Matters Research Program. *Modeling Social Vulnerability for Flood Risk Reduction*, \$2,492 (PI)
- 2019-21 NSF EAGER Coastlines & People. *Modeling the Social Ecology of Coastal Flood Risk*, \$299,872 total (Collaborator, PI: Richard Matthew)
- 2019-21 California Institute for Water Resources. *Assessing Health Impacts of Impaired Water Quality in California*, \$34,905 (PI)
- 2019-20 UCI Hellman Fellowship. \$50,000 (PI)
- 2019 UCI Council on Research, Computing, and Libraries (CORCL), \$1,815 (PI)
- 2018 UCI School of Social Ecology, *Faculty Research Development Fund*, \$6,100 (PI)
- 2018 UCI CORCL, \$1,662 (PI)
- 2016 Earth Institute Undergraduate Internship Fund, \$2,000 (PI)
- 2016 Earth Institute Research Assistant Program, \$1,500 (PI)
- 2016 Earth Institute Summer Internship Fund, \$4,700 (PI)
- 2016 NSF Research Experience for Undergraduates (REU). *America's Water - The Changing Landscape of Risk, Competing Demands and Climate*, \$16,800
- 2016-17 World Bank. *Building Capacity for Rapid Financial Response to Natural Hazards*, \$100,000 (Co-PI, PI: Upmanu Lall)
- 2015-17 The Nature Conservancy. *NatureNet Postdoctoral Fellowship*, \$200,000

PRESENTATIONS

Invited Lectures & Presentations

- 2025 Speaker, *Water Governance Disparities and Utility Performance*, University of Washington, Center for Environmental Politics Colloquium Series, May 16.
- 2024 Speaker, *Water Governance Disparities and Utility Performance: Evidence from California*. American Geophysical Union Fall Meeting, Washington, DC, December 9-13.

- 2024 Panelist, *Water Equity and Health*. Consortium of Universities for Global Health, Los Angeles, March 8.
- 2023 Panelist, *Water Affordability & Metropolitan's Climate Adaptation Master Plan for Water*. Board Committee meeting. Metropolitan Water District of Southern California, August 14.
- 2023 Speaker, *Advancing Equity in Wastewater Adaptation to Climate Change*. NCAR Innovator Symposium, National Center for Atmospheric Research, Boulder, CO, August 1.
- 2023 Panelist, *Affordability Research Panel: What do the numbers say?*. Southern California Water Affordability Symposium. University of California Riverside, May 18.
- 2022 Panelist, *Equity in Water*. Water Forum: San Bernardino Valley Municipal Water District. San Bernardino, CA, October 20.
- 2022 Panelist, *UCI Perspectives on Data: Climate, Drinking Water Safety*. Water Data Summit, Irvine, CA, August 18.
- 2022 Panelist, *Rising Cost of Water Service in California*. Water Education for Latino Leaders (WELL) conference, Pico Rivera, CA, June 11.
- 2022 *Equity in Drinking Water Compliance: Evidence from California*. University of California Santa Barbara, UC Environmental Economics Seminar Series, Virtual, January 14.
- 2021 *Drinking Water Equity in California*. UC Agriculture and Natural Resources, Water Webinar Series, Virtual, October 15.
- 2021 *Water Equity and Drinking Water Compliance*. American Geophysical Union Fall Meeting, New Orleans, LA, December 13-17.
- 2021 *Impact Evaluation of Water Projects*. World Bank and Brazilian Ministry of Economy. Impact Evaluation Workshop, Virtual, August 5.
- 2021 *Water Equity and Compliance with Drinking Water Standards*. University of British Columbia, WESTalks Distinguished Seminar Series, Virtual, November 4.
- 2021 *Trends in California Water Rates and Utility Selection of Pricing*. University of California Riverside, Water Seminar Series, Virtual, January 20.
- 2020 *Can Social Media Enable Flood Risk Mitigation? Evidence using propensity score matching*. American Geophysical Union Fall Meeting, Virtual, December 1-17.
- 2020 Panelist, *Financial Resiliency Panel*. California Water Data Summit, Virtual, August 21.
- 2019 *National Trends in Water Quality & Community Response*. University of Illinois, Energy-Water-Environment Sustainability Seminar, April 8.
- 2019 *Trends in Water Quality & Community Response in California*. UCI NSF Research Opportunities for Community College Teachers (ROCCT). Irvine, CA, June 18.
- 2018 *Non-Structural Approaches to Flood Resilience*. UCI-Vietnam Emergency Management Forum. Irvine, CA, October 28.
- 2018 *National Trends in Water Quality & Implications for California's Proposed Drinking Water Fund*. UC Irvine, Bridges OC, May 3.
- 2018 *Research Priorities to Help Reduce Drinking Water Violations*. Association of State Drinking Water Administrators, Webinar, March 26.
- 2017 *Household Response to Water Insecurity*. University of California Riverside, Water Seminar Series, November 1.
- 2016 *Water for Society and Ecosystems in New York*. The Nature Conservancy. Albany, NY, February 12.
- 2015 *Adapting to Extreme Events: Household Response to Floods in Urban Areas*. Tufts University, Department of Civil and Environmental Engineering, Graduate Environmental Seminar, April 5.

- 2015 *Adapting to Extreme Events: Household Response*. Columbia University, Department of Earth and Environmental Engineering, March 28.
- 2013 *Household Economic Losses due to 2011 Bangkok Flood*. Thailand Land Forum, Bangkok, June 2.

Conference Presentations

- * Presentation by co-author,
- ** Presentation by Allaire Group member

- 2024 Flores Jaimes, F. **, Villegas, K., McGuire, C., Mendez, M., Allaire, M. *(Dis)Trust in Tap Water: How Embodied Experience Shape Household Perception*. Association of Collegiate Schools of Planning, Annual Conference, Seattle, WA, November 7-9.
- 2024 Allaire, M. and Ignacio, R. *Water Governance Disparities and Utility Performance: Evidence from California*. Environmental Politics and Governance, Quebec City, Canada, June 19-21.
- 2023 Allaire, M. *Examining Drinking Water Equity – Insights from California and Directions for Future Research*. American Geophysical Union Fall Meeting, San Francisco, CA, December 11-15.
- 2023 Bianca, B.**, Allaire, M., Lall, U. *Disparities in Access to Water and Wastewater: Drivers of Inequity and the Role of Governance*. American Geophysical Union Fall Meeting, San Francisco, CA, December 11-15.
- 2023 Ignacio, R.** and Allaire, M. *Governance Disparities and Drinking Water Compliance: Evidence from California*. Social Cost of Water Pollution Workshop, Washington DC, October 11-13.
- 2022 Ignacio, R.** and Allaire, M. *Local Water Boards and Governance in California*. Water and Environment Student Talks Conference, Virtual, June 8.
- 2021 Allaire, M. and Acquah, S. *Water Equity and Compliance with the Safe Drinking Water Act*. Annual EPA Drinking Water Workshop, Virtual, August 30.
- 2021 Allaire, M., Lyu, C., Antosz, J., Devarajan, A. (2021). *Capturing Drinking Water Equity: Insights for Future Research*. American Geophysical Union Fall Meeting, Oral presentation, New Orleans, LA, December 13-17.
- 2021 Allaire, M., Mackay, T., Lall, U. *Community Response to Impaired Drinking Water Quality*. Social Cost of Water Pollution Workshop, Virtual, April 23.
- 2021 Allaire, M., Dinar, A. *What Drives Water Utility Selection of Pricing Methods? Evidence from California*. UC Agriculture and Natural Resources, Water Program Team Workshop, Virtual, March 10.
- 2020 Allaire, M., Borate, A.** *Social Disparities in Flood Vulnerability: Validating Indicators across Time, Space, and Scale of Analysis*. Association of Collegiate Schools of Planning Annual Conference, Virtual, November 5-8.
- 2020 Allaire, M., Borate, A.**, Wu, Y. *Social Disparities in Flood Vulnerability: Validating Indicators across Time, Space, and Scale of Analysis*. UCLA Climate Adaptation Research Symposium, Virtual, September 21.
- 2020 Allaire, M. *Can Social Media Enable Flood Risk Mitigation?* Natural Hazards Research and Applications Workshop. University of Colorado Boulder, Virtual, July 12-15.
- 2020 Allaire, M., Dinar, A.* *What Drives Water Utility Selection of Pricing Methods? Evidence from California*. Annual Conference of the European Association of Environmental and Resource Economists, Virtual, June 23- July 3.
- 2019 Allaire, M., Mackay, T., Zheng, S., Lall, U. *National Trends in Water Quality & Community Response*. California Water Data Conference. Davis, CA, August 15.

- 2019 Allaire, M., Zheng, S., Mackay, T., Lall, U. *Assessing Community Response to Impaired Drinking Water with Consumer Purchase Records*. American Association of Geographers (AAG) Annual Meeting. Washington, D.C., April 3-9.
- 2019 Allaire, M., Zheng, S., Mackay, T., Lall, U. *Community Response to Impaired Drinking Water Quality*. Workshop on Integrated Assessment Models and the Social Costs of Water Pollution. Cornell University, Ithaca, NY, April 2-3.
- 2018 Allaire, M., and E. Alencar. *Trends in Water Rate Structures to Encourage Conservation: Evidence from California*. American Geophysical Union Fall Meeting, Oral presentation, Washington, DC, December 10-14.
- 2018 Allaire, M., S. Zheng, and U. Lall. *Assessing Health Impacts of Impaired Drinking Water with Consumer Purchase Behavior*. American Geophysical Union Fall Meeting, Oral presentation, Washington, DC, December 10-14.
- 2018 Allaire, M., S. Zheng, T. Mackay, and U. Lall. *Community Response to Impaired Drinking Water Quality: Evidence from Sales of Medicine and Bottled Water*. UC Water/UC ANR Annual Meeting. Sacramento, CA, October 24-26.
- 2018 Allaire, M., Zheng, S.; Lall, U. *Community Response to Impaired Drinking Water Quality*. 1st Annual Water Security Conference. Toronto, Canada, June 17-20.
- 2018 Allaire, M., Zheng, S.; Lall, U. *Big Data and Health Impacts of Drinking Water Quality Violations*. SESYNC Workshop: Advances in Socio-Environmental Systems Research. Annapolis, MD, June 11-13.
- 2017 Allaire, M., Zheng, S.; Lall, U. *Big Data and Health Impacts of Drinking Water Quality Violations*. American Geophysical Union Fall Meeting, Oral presentation, New Orleans, LA, December 11-15.
- 2017 Allaire, M., Wu, H.; Lall, U. *National Trends in Drinking Water Quality Violations*. World Environmental & Water Resources Congress. Sacramento, CA, May 21-25.
- 2016 Allaire, M., Wu, H.; Lall, U. *Beyond Flint: National Trends in Drinking Water Quality Violations*. American Geophysical Union Fall Meeting, Oral presentation, San Francisco, CA, December 12-16.
- 2016 Allaire, M. *Disaster Loss and Social Media: Can Online Information Increase Flood Resilience?* International Conference on Sustainable Development, New York, NY, September 21-22.
- 2016 Allaire, M. *Informing Mitigation of Disaster Loss through Social Media*. World Environmental & Water Resources Congress. Palm Beach, FL, May 22-26.
- 2016 Allaire, M. *Can information encourage flood adaptation action? Evidence from a randomized field experiment*. EAERE FEEM VIU Summer School in Resource and Environmental Economics. Venice, Italy, June 26-30.
- 2015 Allaire, M. *Using practical and social information to influence flood adaptation behavior*. Southern Economics Association. New Orleans, LA, November 21-23.
- 2015 Allaire, M. *Can Social Media Inform Mitigation of Disaster Loss?* American Geophysical Union Fall Meeting, Oral presentation, San Francisco, CA, December 14-18.
- 2014 Allaire, M., Kroll, C., and Vogel, R. *The Hydromorphology of an Urbanizing Watershed Using Multivariate Elasticity*. American Geophysical Union Fall Meeting, Oral presentation, San Francisco, CA, December 15-19.
- 2014 Allaire, M. and Brown, S. *The Green Paradox of U.S. Biofuel Subsidies: Impact on Greenhouse Gas Emissions*. World Congress of Environmental and Resource Economics. Istanbul, Turkey, June 28-30.
- 2014 Allaire, M., Fuente, D., Whittington, D., and Jeuland, M. *Forecasts of health costs due to poor water and sanitation in Africa*. University Council on Water Resources, Annual Conference. Medford, MA, June 21-23.

- 2009 Allaire, M. *Drought Mitigation in Semi-Arid Africa*. UN Commission on Sustainable Development, 17th Session, New York, NY, May 4-15.
- 2008 Allaire, M. *Evaluating the Influence of Small Reservoirs on Groundwater Recharge*. 33rd International Geological Congress. Oslo, Norway, August 6-14.
- 2007 Allaire, M. and Archfield, S. *USGS Firm Yield Estimator Model: Evaluating the Influence of Small Reservoirs on Groundwater Recharge*. Geological Society of America Annual Meeting, Denver, CO, October 9-12.

TEACHING EXPERIENCE

Arizona State University

Global Water Policy and Planning (PUP 598)

Graduate elective examining issues in water planning such as institutions and regulations, inequities in access, emerging technologies, privatization, addressing affordability, and community-driven planning practices.

Taught 1 time

University of California Irvine

Principles of Economics for Planning and Policy (UPPP 146)

Upper-division undergraduate course that surveys core concepts in microeconomics that explain underlying drivers and market-based policy instruments for urban and environmental issues. Taught 6 times.

Social Ecology Field Study (SE 195)

Undergraduate internship and career development workshop. Taught 2 times.

Environmental Economics and Policy (UPPP 205)

Graduate elective providing an overview of the theory and practice of identifying market failures and efficient policy responses. Issues of externalities, public goods, and open-access resources are emphasized. Students are also introduced to benefit-cost analysis methods for evaluating proposed policies. Students apply their knowledge in (1) a mock negotiation exercise for a proposed development project, and (2) prepare a critical response to a flawed benefit-cost analysis of this proposed project. Taught 3 times.

Microeconomics for Urban Planning (UPPP 206)

Graduate course at the Master's level, required for MURP degree. Taught 1 time.

Water Policy and Planning (UPPP 232)

Graduate elective examining issues in water planning such as institutions and regulations, inequities in access, emerging technologies, privatization, addressing affordability, and community-driven planning practices. Taught 4 times

Global Development Network

- 2011 Instructor. *Training Workshop: Sensitivity Analysis in Cost-Effectiveness Assessments*. Global Development Network, Bangkok, Thailand.

STUDENT ADVISING

Postdoctoral Fellow Advisor

- 2024- present Ricardo Rubio (ASU, ASU Water Institute/ SGSUP)
- 2024- present Gabriel Lara (UC-Irvine Public Health)
- 2022-2023 Sharaban Anica (Urban Planning & Public Policy)
Current position: Assistant Director of Data Management, Warrington College of Business, University of Florida
- 2019-2020 Sarah Acquah (Urban Planning & Public Policy)
Current position: Economist, Minnesota Pollution Control Agency

Ph.D. Student Advisor

- 2019- present Qi Bing (Urban Planning & Public Policy), *2020 Berkeley Summer School in Environmental and Energy Economics*
- 2019- 2024 Aishwarya Borate (Urban Planning & Public Policy), *2022-23 AAUW International Doctoral Fellowship; 2020 ICPSR Summer Program Scholarship*
Current position: Postdoctoral Scholar, UC Irvine
- 2022-2024 Flor Flores Jaimes (Urban Planning & Public Policy), *2022 UCI Graduate Opportunity Fellowship*
- 2021-2024 Yifan Li (Urban Planning & Public Policy)

Ph.D. Student Committee Member

- 2020- 2021 Charlotte Love (Civil & Environmental Engineering), advancement committee
- 2018-2019 Paroma Wagle (Urban Planning & Public Policy), advancement committee

Ph.D. Summer Research Supervisor

- 2023 Bianca Brusco (Statistics)
- 2022 Jiwon Son (Economics)
- 2022 Sewon Ohr (Geography, Univ. of Texas - Austin)
- 2019 Marco del Ángel (Economics)
- 2018 Prami Sengupta (Urban Planning & Public Policy)
- 2018 Eduardo Alencar (Social Ecology)
- 2018 & 2019 Taylor Mackay (Economics)

Masters Student Advising

- 2022-2023 J. Steven Raquel (Statistics), GSR research advisor
- 2021 Laila El Hasan (Public Health), GSR research advisor
- 2020 Jessica Cascio (Statistics), Independent study advisor
- 2018-2019 Qi Bing (MURP), Professional Report Advisor, *Solutions for Lead Service Lines Replacement in the City of Buffalo*. Honors: 2019 Orange County Association of Environmental Professionals Scholarship.
- 2017-2018 Mengdi Li (MURP), Professional Report Advisor, *Urban Heat Island Mitigation Strategies in Southern California*. Honors: 2018 Orange County American Planning Association Student Award.

2017 Shuyan Zheng, MS Environmental Engineering, Columbia University
 2016-2017 Haowei Wu, MS Environmental Engineering, Columbia University
 2016 Beatriz Reyes Lira, MS Sustainability Management, Columbia University
 2016 Ran Li, MS Environmental Engineering, Columbia University
 2016 Shanon Hsuan-Ming Hsu, MS Quantitative Methods in the Social Sciences, Columbia University

Undergraduate Research Advisor

2022 Chupeng Zheng, BS Math & Business Economics, UC Irvine
 2022 Samantha Lo, BA Urban Studies, UC Irvine
 2022 Nathan Chen, BA Environmental Science & Policy, UC Irvine
 2022 Brenda Vuong, BA Environmental Science & Policy, UC Irvine
 2022 Jackie Zhang, BS Computer Science, UC Irvine
 2022 Xinkai Qian, BS Computer Science, UC Irvine
 2021-2022 Dylan Zueck, BS Software Engineering, UC Irvine
 2021-2022 Chenhan Lyu, BS Computer Science, UC Irvine. *Honors: UCI SURP fellow*
 2021-2022 Abhishek Devarajan, BS Mathematics, UC Irvine. *Honors: UCI UROP fellow*
 2021 Jakub Antosz, BS Computer Science, UC Irvine
 2019-2021 Romeo Ignacio, BS Quantitative Economics & Math, UC Irvine. *Honors: UCI UROP fellow*
 2019-2021 Yifan Wu, BS Data Science, UC Irvine. *Honors: UCI UROP fellow*
 2021 Stat 170a Data Science Capstone
 Joseph Hani Kassab, BS Data Science
 Zeyu Jin, BS Data Science
 Yechan Seo, BS Data Science
 2019-2020 Leo Wei, BS Data Science, UC Irvine. *Honors: UCI UROP + SURP fellow*
 2019 Justin Chang, BA Business Economics, UC Irvine
 2019 Stat 170a Data Science Capstone
 Shannon Jusman, BS Data Science
 Leo Wei, BS Data Science
 Yanan Wu, BS Data Science
 Xinwen Li, BS Data Science
 2018 Nathalie Vidal, BA Economics, UC Irvine. *Honors: UCI SURP fellow*
 2018 UCI Multidisciplinary Design Program
 Nathalie Vidal, BA Economics
 Truong Xe, BA Economics
 Leda Escoto, BS Earth System Science
 2016 Talia Pinker, BS Environmental Engineering, Columbia University
 2016 Alice Ning Hu, BS Statistics, Columbia University

SERVICE

Referee (counts since 2017)

AWWA Water Science (5), *Earth's Future* (3), *Environmental Research* (1), *Environmental Science & Technology* (1), *Journal of Agricultural and Resource Economics* (1), *Journal of Policy Analysis and Management* (1), *Nature Communications* (2), *PloS one* (1), *PNAS* (2), *Water Economics and Policy* (9), *Water Resources Research* (6), *WIREs Water* (1)

Other Reviews

Congressional Budget Office

Funder Review Panels

NSF Strengthening American Infrastructure (2024), *Andrew Carnegie Fellows Program* (2021,2022), *NSF Graduate Research Fellowship Program* (2019)

Editorial Boards

- 2024- present Associate Editor, *WIREs Water*, Human Water Section
2022- present Associate Editor, *AWWA Water Science*
2021-present Review Editor, *Frontiers in Climate*, Climate, Ecology and People section
2018-present Book Review Editor. *Water Economics and Policy*
2022 Guest Editor, *Water Economics and Policy*, Special Issue: Economics of Flooding

Technical Advisory Boards

- 2021-present Member, *American Meteorological Society*, Water Resources Committee
2018-present Research Network Expert, *Public Policy Institute of California*, Water Policy Center
2021-2023 Member, *Panta Rhei: Socio-hydrologic Modeling Working Group*
2020-2022 Member, *AGU Convergent Science for Water and Health*, Technical Committee
2018-2020 Member, *Flood-MAR Research Advisory Committee*, Economic Analysis Subcommittee
2019 Workshop Committee Member, *National Academies Water Science and Technology Board*

Working Group

- 2024-present Member, *A Global Synthesis of Flood Impacts: Understanding the country-level vulnerability and causes*, USGS Powell Center. (PIs: Naresh Devineni, Stacey Archfield)
2024-present Member, *CRISES: National Center for Water Policy*, NSF Planning Grant #2437086. (PI: David Keiser)

Other Professional Service

- 2021 **Convener and Co-Chair**, AGU Fall Meeting, Session “America's Water: Infrastructure gaps, their health, environmental and economic impacts and future directions”
2021 **Convener and Co-Chair**, AGU Fall Meeting, Session “Panta Rhei: Hydrology, Society, and Environmental Change”
2020 **Convener and Chair**, AGU Fall Meeting, Session “Hydrology, Society, & Environmental Change: Convergent Approaches to Human-Water Interactions”
2020 **Judge**, AGU Outstanding Student Paper Award
2019 **Convener and Co-Chair**, AGU Fall Meeting, Session “Hydrology, Society, & Environmental Change: Convergent Approaches to Human–Water Interactions”

- 2018 **Convener and Co-Chair**, AGU Fall Meeting, Session “Hydrology, Society, & Environmental Change: Human-Water Interactions Across Scales”
- 2018 **Judge**, AGU Outstanding Student Paper Award
- 2017 **Convener and Chair**, AGU Fall Meeting, Session “Addressing Limited Water Demand Data for Research and Policy”
- 2017 **Judge**, AGU Outstanding Student Paper Award

University Service (Arizona State University)

- 2024- present Member, Graduate Committee, School of Geographical Sciences and Urban Planning
- 2024- present Member, Urban Planning Committee, School of Geographical Sciences and Urban Planning

University Service (University of California, Irvine)

- 2021-2024 Faculty Affiliate, Center for Land, Environment, and Natural Resources (CLEANR), UCI Law
- 2023-2024 Member, UPPP Ph.D. Committee
- 2020- 2024 Member, UPPP MPP Steering Committee
- 2019- 2024 Member, UCI Council on Educational Policy
 This council of the Academic Senate makes recommendations regarding curricula, programs, and grading policies. I have served as a lead for an assessment of the university’s online degree policies. As a council member, I provide input into actions such as evaluating 25 proposals to modify minors and majors, approving a new minor in Integrative Health, and recommendation to eliminate SAT admission requirement, and establishing guidelines for online instruction.
- 2017- 2024 Member, Water UCI Core Committee
- 2017- 2024 Member, UPPP Department Merit & Review Ad Hoc Committee
- 2020-2022 Member, UCI Subcommittee on International Education
- 2018-2019 Member, UPPP Undergraduate Programs Committee
- 2018 Water Cluster faculty search, Department of Ecology and Evolutionary Biology
- 2018 Member, UPPP Ph.D. Admissions Committee

Community Service

- 2010-2011 Team Member, Engineers Without Borders, *Sanitation in Ciudad de Dios*, Peru.
- 2009-2010 Volunteer Hydrologist, Howard University. *Dewatering system for UNESCO archaeological site*. Kunta Kinteh Island, The Gambia.

PROFESSIONAL EXPERIENCE

Global Development Network	<i>Technical Advisor - Policy Simulation and Cost-Benefit Analysis</i>	2010- 2013
World Bank	<i>Short Term Consultant - East Asia and Pacific Infrastructure Unit</i>	2011
Resources for the Future	<i>Economic Analysis - Research Assistant</i>	2008- 2010
AMEC Earth & Environmental	<i>Environmental Impact Assessment</i>	2007- 2008

PROFESSIONAL AFFILIATIONS

American Geophysical Union, American Association for the Advancement of Science, American Water Works Association

MEDIA COVERAGE

- ‡ Coverage of Allaire Group research
† Interview with M. Allaire
31. † Resources Radio. “Addressing Access to Wastewater Infrastructure in the U.S.” Resources for the Future podcast. October 8, 2024
 30. † The Week. “How safe is America's drinking water?” June 10, 2023.
 29. † National Geographic. “Is tap water safe to drink?” March 20, 2023.
 28. † WAMU Washington DC Public Radio. “Water Week: Access to clean drinking water” Studio 1A, August 8, 2022.
 27. † KALW San Francisco Public Radio. “How safe is our drinking water? Your Call: One Planet Series, November 22, 2021.
 26. † Vox. “Millions of Americans don’t have drinkable water. Can the infrastructure bill fix that?” September 4, 2021.
 25. † Australia National University. “Water Justice Podcast”, August 25, 2021.
 24. † Grist. “Long overdue: The Senate just passed \$35 billion for clean drinking water”, May 1, 2021.
 23. † Chicago Sun Times. “Does Durbin claim about Chicago area’s lead pipes hold water?”, April 18, 2021.
 22. † Grist. “California’s water systems are in deep trouble”, April 21, 2021.
 21. † Enisa “Across the U.S., Millions of People are Drinking Unsafe Water. How can we fix that?” Thirsting for Solutions series, September 15, 2020.
 20. † The Guardian. “ ‘We’ve always known ours was contaminated’: The trouble with America’s water”, September 15, 2020.
 19. † Scientific American. “Expanding Paved Areas Has an Outsize Effect on Urban Flooding”, May 15, 2020.
 18. † AP News. “Investigation: Lead in some Canadian water worse than Flint”, November 4, 2019.
 17. † Salon. “How to address America’s lead crisis and provide safe drinking water for all”, September 8, 2019.
 16. † PolitiFact. “60 million Americans live in a place where the water they drink is unsafe”, May 7, 2019.
 15. † ABC News. “The Briefing Room with Davin Dwyer”. Televised appearance. March 22, 2019.
 14. ‡ AGU GeoSpace Blog. “Consumer purchasing data shows locals’ response to water contamination”, December 26, 2018.
 13. † KALW Public Radio (NPR Member Station). “How can we ensure access to safe and affordable drinking water in the U.S.?” Your Call: One Planet Series. May 27, 2018.
 12. † The Guardian. “Trump plan to tackle lead in drinking water criticized as 'empty exercise’”, April 26, 2018.
 11. ‡ New York Times. “Here are the places that struggle to meet the rules on safe drinking water”, February 12, 2018.
 10. † USA Today. “Tens of millions of Americans exposed to unsafe drinking water each year”, February 12, 2018.
 9. † ABC10 News. “Tens of millions of Americans exposed to unsafe drinking water each year”. February 12, 2018.
 8. † AAAS Science Magazine. “Millions of Americans drink potentially unsafe tap water. How does your county stack up?”, February 12, 2018.
 7. † Michigan Public Radio. “*Study: Low income, rural areas most vulnerable to drinking water violations*”. The Environment Report. February 20, 2018.
 6. † Business Insider. “American drinking water could soon get a lot dirtier”, February 14, 2018.
 5. ‡ Central Valley PBS. “*Study: Low income, rural areas most vulnerable to drinking water violations*”, February 20, 2018.
 4. ‡ New Hampshire Public Radio (Outside/In) Concord, NH, February 23, 2018.
 3. ‡ KRLD News - CBS Radio 1080 (Minute with Mitch Carr) Dallas, TX, February 16, 2018.
 2. ‡ Philadelphia Inquirer. “Unsafe Water Found in Faucets Across the U.S.”, February 12, 2018.
 1. † Huffington Post. “Common for Americans to go days without safe drinking water”, August 14, 2017.