

# Newsha K. Ajami, Ph.D.

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Stanford University  
Director of Urban Water Policy  
Senior Research Scholar

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<https://woods.stanford.edu/about/woods-faculty/newsha-ajami>

## RESEARCH SPECIALTIES/INTEREST

- Data science in environmental management under climate change
- Assessment of uncertainty and risk in environmental forecasting
- Systems-level and smart resource and infrastructure management under social and environmental uncertainty
- Environmental science-policy interface and effective science communication
- Natural resources and water policy
- Integrated and sustainable water resource management
- Innovative water governance: financing, regulations and big data
- Water-energy-food nexus
- Socio-economic impacts of forecast reliability

## EDUCATION

2002-2006	University of California at Irvine <b>Ph.D. Civil and Environmental Engineering</b>
2000-2002	University of Arizona, <b>M.S. Hydrology and Water Resources (System Engineering)</b>
1998-1999	Sharif University of Technology, Tehran, Iran <b>M.S. Transportation Management</b>
1993-1998	Amir Kabir University of Technology, Tehran, Iran <b>B.S. Civil and Environmental Engineering</b>

## WORK EXPERIENCE

2022-Present	<b>Chief Strategy and Development Officer for Research</b> , Earth and Environmental Services Area, Lawrence Berkeley National Lab
2021-Present	<b>Commissioner (Vice President)</b> , San Francisco Public Utilities Commission (Mayoral Appointment)
2013-2022	<b>Director</b> , Urban Water Innovation and Policy Program, Stanford Woods Institute for the Environment, Stanford University
2013-2022	<b>Senior Research Engineer</b> , Woods Institute for the Environment, Stanford University
2016-2019	<b>Co-lead</b> , the Urban Water Systems & Institutions Thrust at the NSF-ReNUWIt Engineering Research Center
2014-2022	<b>Lecturer</b> , Stanford Public Policy Program
2013-2021	<b>San Francisco Bay Regional Water Quality Control Board member</b> (Gubernatorial Appointment)
2011-2013	<b>Senior Research Associate</b> , Pacific Institute, Oakland, CA
2010-2011	<b>California Science and Technology Policy Fellow</b> , California State Senate Committee on Natural Resources and Water, Office of Honorable Senator Fran Pavley
2007- 2010	<b>Research Consultant</b> , Berkeley Economic Consulting, Inc.

- 2006- 2009 **Postdoctoral Researcher**, University of California, Berkeley, Dr. David Sunding and Dr. George Hornberger  
 2006 **Visiting Scholar**, Stanford University, Dr. Steve Schneider

### **HONORS, AWARDS, AND FELLOWSHIPS**

- 2021 Non-Resident Senior Fellow, Brookings Institution, Brookings Metro  
 2019 Appointment to the National Research Council Owens Lake Scientific Advisory Panel  
 2018 Appointment to the National Academies Board on Water Science and Technology  
 2018 New Voices in Sciences, Engineering and Medicine (SEM), National Academies of Sciences, Engineering, and Medicine  
 2016 Ten experts to watch on Urban Water Policy and Infrastructure, Water Deeply  
 2016 Member of the organizing committee for the White House Water Summit  
 2015 Water Recourses Research Editors’ Citation for Excellence in Refereeing  
 2015 Member of Inaugural class of UC Irvine Engineering Hall of Fame  
 2015 Outstanding Undergrad Practicum Award from Public Policy Program  
 2013 Gubernatorial Appointee to SF Bay Regional Water Quality Control Board  
 2011 Water Leader, Water Education Foundation  
 2010-2011 Science and Technology Policy Fellow  
 2005 Invited scientist at AMS, Science Communication and the Mass Media Workshop  
 2005 AMS Science and Policy Colloquium Fellow  
 2004 Top 10 most-accessed articles, *Advances of Water Resources journal*  
 2004 Top 10 most-accessed articles, *Journal of Hydrology*  
 2000-2003 CSC-World Laboratory Hydrologic Science and Water Resources Fellowship

### **SERVICE AND PROFESSIONAL ACTIVITIES**

- Stanford Emmet Interdisciplinary Program in Environment and Resources PhD admission committee (2019-2020)
- The National Research Council, Owens Lake Scientific Advisory Panel (2019-2020)
- The National Academies, Board on Water Science and Technology (2018-present)
- Associate Editor, Journal of Hydrology (2020-Present)
- Associate Editor, Water Resources Research (2017-Present)
- National Academies Appointee to the Decadal Survey for Earth Science and Applications from Space –Hydrology Panel
- Undergraduate Pre-Major Advisor at Stanford University
- Stanford In Government water program – Faculty mentor
- Organized five workshops at Stanford University
  - Water-Energy in the Baja California Region (May 2014)
  - Bay Area Regional Water Reliability Enhancement Workshop (Sep 2014)
  - Water Innovation Workshop (February, 2015)
  - Recycled Water & the “Yuck” Factor Forum: Shifting Public Attitudes about the Potable Uses of Storm and Waste Water (March 2015)
  - Water-energy nexus in the face of Climate Change (Oct 2015)
- Chair of the outstanding student award committee at American Geophysical Union (AGU)
- Conference session convener at AGU
- Organizing a seminar on applications of Modeling Water Resources Planning and Management in Iran, Tehran University, Tehran, Iran
- Organizing and teaching a two-day training course on water resources modeling software
- Steering Committee, Hydrologic Ensemble Prediction EXperiment (HEPEX)

- Manuscript Reviewer: Water Resources Research, Environmental Science and Technology, Proceedings of the National Academy of Sciences, Journal of Hydrometeorology, Journal of Hydrology, Advances in Water Resources, Environmental Modeling and Software, Hydrological Processes, sustainability, Hydrology and Earth System Sciences, Water, Water Policy, Environmental Planning and Management.
- Proposal Reviewer: USAID, NSF, NOAA, Natural Sciences and Engineering Research Council of Canada (NSERC), Netherlands Organization for Scientific Research (NWO)

## PUBLICATIONS

### Refereed Publications

39. Bolorinos, J.\*, R. Rajagopal, **N.K. Ajami**, 2021. “How long do drought water savings last? Assessing water conservation rebound with survival models”, *Nature Sustainability*, *Under Review*.
38. Brand, M. W., K. Quesnel, P. Saks, A. Bomblies, B. Cohen, B.F. Sanders, D. Rosowsky, E. Parker, J. Lee, J. Nay., J. Tobin, L. Mandle, M. Allaire, N. Gudino-Elizondo, **N.K. Ajami**, N. Wobbrock, N. Ulibarri, O. Wing, P. Adriaens, S. Grant, S. Wright, T. Gartner, W. Matson, Z. Knight, 2021. “Environmental Impact Bonds: A common framework and looking ahead”, *Environmental Research: Infrastructure and Sustainability*, 1, 023001, doi: 10.1088/2634-4505/ac0b2c.
37. Blount, W.#, R. Abdi, C.L. Panos, **N.K. Ajami**, T.S. Hogue , 2021. “Building to conserve: Quantifying the outdoor water savings of residential redevelopment in Denver, Colorado”, *Landscape and Urban Planning Journal*, 214, 104178, doi: 10.1016/j.lanurbplan.2021.104178.
36. Adriaens, P., **N.K. Ajami**, 2021. “Infrastructure and the Digital Economy: Reinventing our Role in the Design, Financing and Governance of Essential Services for Society”, *Journal of Environmental Engineering*, doi: 10.1061/(ASCE)EE.1943-7870.0001866 (*INVITED*).
35. Bolorinos, J.\*, R. Rajagopal, **N.K. Ajami**, 2021. “Mining the Gap in Long-Term Residential Water and Electricity Conservation”, *Environmental Research Letters*, 16(2), 024007, doi: 10.1088/1748-9326/abbfc2.
34. Blount, K. #, J.M. Wolfand, C.D. Bell, **N.K. Ajami**, T.S. Hogue , 2021. “Satellites to Sprinklers: Assessing the Role of Climate and Landcover Change on Patterns of Urban Outdoor Water Use”, *Water Resources Research*, 57(1), doi: 10.1029/2020WR027587.
33. Quesnel, K. \*, S. Agrawal\*, **N.K. Ajami**, 2020. “Diverse paradigms of residential development inform water use and drought-related conservation behavior”, *Environmental Research Letters*, 15(12), 124009, doi:10.1088/1748-9326/abb7ae, Featured by multiple news outlets including *Science Daily* and *Stanford News Service*, [Link](#).
32. Smith, G.\*, L. Block\*, **N.K. Ajami**, A. Pombo, L. Velasco Aulcy, 2020. “Trade-offs Across the Water-Energy-Food Nexus: A Triple Bottom Line Sustainability Assessment of Desalination for Agriculture”, *Environmental Science and Policy*, 114, doi:10.1016/j.envsci.2020.08.008, Featured by the *Water in the West News Service*, [Link](#).
31. Bolorinos, J.\*, **N.K. Ajami**, R. Rajagopal, 2020. “Consumption change detection for urban planning: monitoring and segmenting water customers during drought”, *Water Resources Research*, 56(1), doi: 10.1029/2019WR025812, Featured in a policy brief, [Link](#).
30. Quesnel, K. \*, **N.K. Ajami**, A. Marx, 2019. “Shifting landscapes: decoupled urban irrigation and greenness patterns during severe drought”, *Environmental Research Letters*, 14(6), 064012, doi: 10.1088/1748-9326/ab20d4, Featured by the *Water in the West News Service*, [Link](#).
29. Gonzales, P.\*, **N.K. Ajami**, 2019. “Goal-based water trading expands and diversifies supplies for enhanced resilience”, *Nature Sustainability*, 2, doi:10.1038/s41893-019-0228-z. Featured by number of news outlets including *Stanford News Service*, [Link](#).
28. Quesnel, K.\*, **N.K. Ajami**, 2019. “Large Landscape Urban Irrigation: A Data-Driven Approach to Evaluate Conservation Behavior”, *Water Resources Research*, 55(1), doi:10.1029/2018WR023549.

27. Sari, M.A., M. Badruzzaman, C. Cherchi, M. Swindle, **N.K. Ajami**, J.G. Jacangelo, 2018. “Recent Innovations and Trends in In-Conduit Hydropower Technologies and Their Applications in Water Supply Systems”, *Journal of Environmental Management*, 228, doi:10.1016/j.jenvman.2018.08.078.
26. Gordon, B.L.\*, K.J. Quesnel\*, R. Abs\*, **N.K. Ajami**, 2018. “A Case-Study Based Conceptual Model for Multi-Sector Green Infrastructure Performance Assessment”, *Journal of Environmental Management*, 223, doi:10.1016/j.jenvman.2018.06.029.
25. Bolorinos, J.\*, Y. Yu, **N.K. Ajami**, R. Rajagopal, 2018. “Balancing Marine Ecosystem Impact and Freshwater Consumption with Water-Use Fees in California’s Power Markets: An Evaluation of Possibilities and Trade-Offs”, *Energy Policy*, 226 (C), doi:10.1016/j.apenergy.2018.06.028. Featured by *Stanford News Service*, [Link](#)
24. Bolorinos, J.\*, **N.K. Ajami**, G. Muñoz, R. Jackson, 2018. “Evaluating Environmental Governance Along Cross-Border Electricity Supply Chains With Policy-Explicit Life-Cycle Assessment: A Case Study of the California-Mexico Energy Exchange”, *Environmental Science and Technology*, 52 (9), doi:10.1021/acs.est.7b06580.
23. Roby, N.\*, P. Gonzales\*, K. Quesnel\*, **N.K. Ajami**, 2018. “A Novel Search Algorithm for Quantifying News Media Coverage as a Measure Of Environmental Issue Salience”, *Environmental Modeling and Software*, 101, 249-255, doi:10.1016/j.envsoft.2017.12.012.
22. Quesnel, K.\*, **N.K. Ajami**, 2018. “Advancing Water Innovation Through Public Benefit Funds: Examining California's Approach For Electricity”, *American Water Works Association Journal*, 110(2), doi: 10.5942/jawwa.2018.110.0009. Featured by number of news outlets including Stanford School of Engineering News, [Link](#).
21. Gonzales, P.\*, **N.K. Ajami**, 2017. “Social and Structural Patterns of Drought-Related Water Conservation and Rebound”, *Water Resources Research*, 53(12), doi:10.1002/2017WR021852. Featured by *AGU Research Spotlights*, [Link](#).
20. Quesnel, K.\*, **N.K. Ajami**, 2017. “Evaluation of Residential Water Use Behavior Changes Linked to Heightened News Media Coverage of Drought”, *Science Advances*, 3(10), doi:10.1126/sciadv.1700784. Featured by number of news outlets including *Yale Environment Review*, [Link](#).
19. Gonzales, P.\*, **NK Ajami**, Y. Sun\*, 2017. “Coordinating Water Conservation Efforts Through Tradable Credits: A Proof of Concept for Drought Response in the California Bay Area”, *Water Resources Research*, 53, doi:10.1002/2017WR020636. Featured by number of news outlets including *Stanford News Service*, [Link](#).
18. Quesnel, K.\*, **N.K. Ajami**, N. Wyss, 2017. “Accelerating the Integration of Distributed Water Solutions: A Conceptual Financing Model from the Clean Energy Sector”, *Environmental Management*, 60 (357), 1-15, doi: 10.1007/s00267-017-0914-4. Featured by number of news outlets including Stanford School of Engineering News, [Link](#).
17. Gonzales, P.\*, **N.K. Ajami**, 2017. “The Changing Water Cycle: Impacts of an Evolving Supply and Demand Landscape on Urban Water Reliability in the Bay Area”, *WIREs Water*, e1240. doi:10.1002/wat2.1240. Featured by *Advanced Science News*, [Link](#).
16. Gonzales, P.\*, **N.K. Ajami**, 2017. “An Integrative Regional Resilience Framework for the Changing Urban Water Paradigm”, *Sustainable Cities and Societies*, 30, 128-138.
15. Ulibarri N.\*, B.E. Cain, **N.K. Ajami**, 2017. “A Framework for Building Efficient Environmental Permitting Processes”, *Sustainability*, 9(2):180.
14. Gonzales, P.\*, **N.K. Ajami**, 2015. “Urban Water Sustainability: An Integrative Framework for Regional Water Management”, *Discussion Paper, Hydrology and Earth System Sciences*, 12 (11), doi:10.5194/hessd-12-11291-2015.
13. Nasser, M., B. Zahraie, **N.K. Ajami**, 2014. “Possibilistic versus Probabilistic Methods for Multi Model Ensemble Hydrological Simulations”, *Journal of Hydrology*, 511, 675-691.

12. **Ajami, N.K.**, C. Gu, 2010. “Complexity in Soil Nitrogen Modeling: A Case for Model Averaging”, *Journal of Stochastic Environmental Research and Risk Assessment (SERRA)*, 24(6), 831-844, doi: 10.1007/s00477-010-0381-4. (*INVITED*)
11. Franz, K.J., P. Butcher, **N. K. Ajami**, 2010. “Addressing Snow Model Uncertainty in Hydrologic Predictions”, *Advances in Water Resources*, 33,820-832.
10. Sunding, D.L., **N.K. Ajami**, 2009, “The Impacts of Delta Export Restrictions on Urban Water Consumption in Southern California”, *ARE Update Volume 12, Number 6*. UC Berkeley: Giannini Foundation of Agricultural Economics.
9. **Ajami, N.K.**, Q. Duan, S. Sorooshian, 2009. “Reply to Comment by B. Renard, D. Kaveski and G. Kuczera on “An integrated hydrologic Bayesian multimodel combination framework: Confronting input, parameter, and model structural uncertainty in hydrologic prediction”, *Water Resource Research*, 45, W03604, doi:10.1029/2008WR007215.
8. **Ajami, N.K.**, G.M. Hornberger, D.L. Sunding, 2008. “Sustainable Water Resource Management under Hydrological Uncertainties”, *Water Resources Research*, 44, W11406, doi:10.1029/2007WR006736.
7. **Ajami, N.K.**, Q. Duan, S. Sorooshian, 2007. “An Integrated Hydrologic Bayesian Multi-Model Combination Framework: Confronting Input, Parameter and Model Structural Uncertainty in Hydrologic Prediction”, *Water Resources Research*, 43, W01403, doi:10.1029/2005WR004745.
6. Duan, Q., **N.K. Ajami**, X. Gao, So. Sorooshian, 2007. “Multi-Model Ensemble Hydrologic Prediction Using Bayesian Model Averaging”, *Advances in Water Resources*, 30(5), 1371-1386. (Listed as one of the most requested papers from the *Advances of Water Resources* journal)
5. **Ajami, N.K.**, Q. Duan, X. Gao, S. Sorooshian, 2006. “Multi-Model Combination Techniques for Hydrological Forecasting: Application to Distributed Model Intercomparison Project Results”, *Journal of Hydrometeorology*, 7(4), 755–768.
4. Franz, K., **N.K. Ajami**, J., Schaake, R., Buizza, 2005. “The Hydrologic Ensemble Prediction EXperiment (HEPEX)”, *EOS*, 86(25).
3. **Ajami N.K.**, H. Gupta, T. Wagner, S. Sorooshian, 2004. “Calibration of A Semi Distributed Hydrologic Model For Streamflow Estimation Along A River System”, *Journal of hydrology*, 298,112-135, doi: 10.1016/j.jhydrol.2004.03.033. (*INVITED*-Listed as one of the most requested papers from the *Journal of Hydrology*)
2. Reed, S., Koren, V., Smith, M., Zhang, Z., Moreda, F., Seo, D.-J. and **DMIP Participants**. 2004. “Overall Distributed Model Intercomparison Project Results”, *Journal of Hydrology*, 298(1-4), 27-60, doi: 10.1016/j.jhydrol.2004.03.031.
1. Karamouz, M., B. Zahraie, **N. Khodatalab**, 2003. “Reservoir Operation Optimization: A Nonstructural Solution for Control of Seepage from Lar Reservoir in Iran”, *Water International*, 28(1), doi: 10.1080/02508060308691661.

\* Student Advised by N.K. Ajami

# Student Co-Advised by N.K. Ajami

#### Technical Reports and White Papers

19. **Ajami, N.K.**, T. Ng, T. Lattimer, H. Habicht, J. Gebhardt, 2018. “Water Finance: The Imperative for Water Security and Economic Growth”, Policy Report, U.S. Water Partnership, Washington DC. [Link](#)
18. **Ajami, N.K.**, T. Ng, 2018. “A Financing Platform to Support Shifting Paradigm in The U.S. Water Sector: U.S. Water Finance Solutions Inventory”, Report to Inter-American Development Bank.
17. **Ajami, N.K.**, T. Ng, K. Quesnel, 2017. “Living Map of Innovative Water Financing Mechanisms in the United States”, [Link](#)
16. Quesnel, K., **N.K. Ajami**, N. Wyss, 2016. “Tapping into Alternative Ways to Fund Sustainable Water Projects: A Financing Framework from the Electricity Sector”, *Water in the West*, Stanford University. [Link](#)

15. Szeptycki, L., E. Hartge, **N. Ajami**, A. Erickson, W. N. Heady, L. LaFeir, B. Meister, L. Verdone, and J.R. Koseff 2016. Marine and Coastal Impacts on Ocean Desalination in California. Dialogue report compiled by Water in the West, Center for Ocean Solutions, Monterey Bay Aquarium and The Nature Conservancy, Monterey, CA. [Link](#)
14. Quesnel, K., **N.K. Ajami**, 2015. “Funding Water In Times of Financial Uncertainty: The Case for a Public Goods Charge in California”, Water in the West, Stanford University. [Link](#)
13. Hanak, E., J. Lund, N.K. Ajami, K. Baerenklau, J. R. DeShazo, J.D. Saphores, K. Schwabe, D. Sedlak, 2015. “California’s Water: Water for Cities”, Policy Brief, Water Policy Center, Public Policy Institute of California. [Link](#)
12. **Ajami, N.K.**, B.H. Thompson, D.G. Victor, 2014. “The Path to Water Innovation”, Discussion Paper 2014-06, The Hamilton Project, Brookings Institute. [Link](#)
11. **Ajami, N.K.**, C. Truelove, 2014. “A Water-Energy Research Agenda: Building California's Policy Foundation for the 21st Century”. [Link](#)
10. Cooley, H., **N.K. Ajami**, M. Heberger, 2013. “Key Issues for Seawater Desalination in California: Marine Impacts”. [Link](#)
9. **Ajami, N.K.**, 2013. “Financing Energy Efficiency and Water Efficiency Improvements in California”, Pacific Institute, CA.
8. **Ajami, N.K.**, J. Christian-Smith, 2013. “Beyond Water Pricing. An Overview of Water Financing Options in California”, Pacific Institute, CA. [Link](#)
7. Cooley, H., K. Donnelly, **N.K. Ajami**, 2013. “Energizing Water Efficiency In California: Applying Energy Efficiency Strategies to Water”, Pacific Institute, CA. [Link](#)
6. Cooley, H., **N.K. Ajami**, V. Srinivasan, K. Donnelly, J. Christian-Smith, 2013. “Global Water Governance in the 21st Century”, Pacific Institute, CA. [Link](#)
5. Cooley, H., **N.K. Ajami**, 2012. “Key Issues for Seawater Desalination in California: Cost and Financing”, Pacific Institute, CA. [Link](#)
4. **Ajami, N.K.**, 2012. “Comments On The Cadiz Conservation, Recovery, And Storage Project Draft Environmental Impact Report”, Pacific Institute, CA. [Link](#)
3. **Ajami, N.K.**, 2012. “California Aquatic Invasive Species State Policy”, prepared for the California State Senate Natural Resources and Water Committee.
2. Sunding, D.L., S.F. Hamilton, **N.K. Ajami**, 2009. “Groundwater Management and the Cost of Reduced Surface Water Deliveries to Urban Areas: The Case of the Central and West Coast Basins of Southern California” . Department of Agricultural & Resource Economics, UCB. CUDARE Working Paper 1081. [Link](#)
1. Sunding, D.L., **N.K. Ajami**, S. Hatchett, D. Mitchell, D. Zilberman, 2009. “Economic Impacts of Reduced Delta Exports Resulting from the Wanger Interim Order for Delta Smelt”. Department of Agricultural & Resource Economics, UCB. CUDARE Working Paper 1083. [Link](#)

*Books and Book Chapters*

3. Gleick, P. H., **N.K. Ajami**, J. Christian-Smith, H. Cooley, K. Donnelly, J. Fulton, M.L. Ha, M. Heberger, E. Moore, J. Morrison, S. Orr, P. Schulte, V. Srinivisan, 2014. “The World’s Water Volume 8: The Biennial Report on Freshwater Resources”.
2. **Ajami, N.K.**, P. Gleick, K. Donnelly, J. Akudago, M. Heberger, A.M. Fikri , 2012. “Transformational Ideas to Enhance Water Security”, Pacific Institute.
1. Sunding, D.L., S.F. Hamilton, **N.K. Ajami**, 2011 “Economic Benefits of Expanded Groundwater Storage in the Central and West Coast Basins of Southern Los Angeles County”, in Angelos Findikakis and Kuniaki Sato (eds.) IAHR Monograph on Groundwater Management Practices, Leiden, Netherlands: CRC Press/Balkema – Taylor & Francis Group, 2011, pp. 157-77.

### Research Briefs

6. Bolorinos, J., **N.K. Ajami, N.K.**, R. Rajagopal, 2020. “New Method to Improve Water Demand Management”, Stanford Woods Institute for the Environment. [Link](#)
5. **Ajami, N.K.**, K. Quesnel, 2019. “Innovative Ideas to Finance Resiliency in the Water Sector”, Research Brief, Stanford Woods Institute for the Environment. [Link](#)
4. Gonzales, P., **N.K. Ajami**, 2017. “Out of sight but not out of mind – The growing role of water conservation in California”, Research Brief, Water in the West, Stanford University. [Link](#)
3. **Ajami, N.A.**, B.H. Thompson, K. Quesnel, 2016. “Renewing Investment in Our Water System”, Research Brief, Stanford Woods Institute for the Environment. [Link](#)
2. **Ajami, N.A.**, B.H. Thompson, 2016. “Overcoming Fragmentation in the Water Sector to Promote Water Innovation: State-level “Offices of Water Resources Innovation and Development”, Research Brief, Stanford Woods Institute for the Environment. [Link](#)
1. **Ajami, N.A.**, B.H. Thompson, 2016. “The Path to Water Innovation”, Research Brief, Stanford Woods Institute for the Environment. [Link](#)

### **MEDIA AND OPINION PIECES**

18. **Ajami, N.K.**, “Building a Climate-Resilient and Equitable Water Sector”, *Water Smart Magazine*, June, 2021. [Link](#)
17. **Ajami, N.K.**, J. W. Kane, “The Hidden Role of Water Infrastructure in Driving a COVID-19 Recovery”, INVITED Blog contribution, *Brookings Institute*, October, 2020. [Link](#)
16. **Ajami, N.K.**, “How Engineers Restored Hope for Our Water Supplies”, *The Future of Everything* Podcast with Russ Altman, August, 2020. [Link](#)
15. **Ajami, N.K.**, “Improving Urban Water Systems Through Data Science, Public Policy, and Engineering”, *Women in Data Science* Podcast, May, 2020. [Link](#)
14. **Ajami, N.K.**, “Solve the Water Equation with Public Participation”, Q&A with the *Bay Area Monitor’s* Robin Meadows, February, 2020. [Link](#)
13. **Ajami, N.K.**, “Zoning in on Water Shortage in California”, *Let’s Talk About Water* Podcast with Jay Famiglietti, The Walrus Lab, January, 2020. [Link](#)
12. **Ajami, N.K.**, “Wildfire’s Threat to Water Quality”, Q&A with *Stanford News Service*, December, 2019. [Link](#)
11. **Ajami, N.K.**, “Urban Water Systems and Sustainable Water Management”, *The Water Values Podcast*, Episode #152, August 2019. [Link](#)
10. **Ajami, N.K.**, “How utilities can adapt “cap & trade” for water security”, INVITED, *The Source Magazine*, International Water Association, November 2018.
9. **Ajami, N.K.**, “Transforming the Way Water Utilities Do Business”, INVITED piece, Manager’s Corner, *SOURCE Magazine*, CA-NV Section AWWA, Fall Edition, 2018. [Link](#)
8. **Ajami, N.K.**, and L. Szeptycki, “Desalination will not solve California’s water woes”, Op-Ed, *San Jose Mercury*, June 1, 2017. [Link](#)
7. **Ajami, N.K.**, “How California Can Reinvent the Water Sector”, INVITED Op-Ed, *News Deeply*, July 4, 2016. [Link](#)
6. **Ajami, N.K.** and B.H. Thompson, “On World Water Day, Identifying a Path Toward Greater Innovation in Water Is Needed”, INVITED Blog contribution, Planet Policy –*Brookings Institute*, March 22, 2016. [Link](#)
5. **Ajami, N.K.**, “California’s Water Sector Moves into the 21st Century”, INVITED Blog contribution, *Eureka –Hoover Institute*, September 29, 2015. [Link](#)

4. **Ajami, N.K.** and B.H. Thompson, “Investing in the Future of California’s Water Sector”, INVITED Blog contribution, Hamilton Project Blog, *Brookings Institute*, April 21, 2015. [Link](#)
  3. **Ajami, N.K.**, “Conserve Energy to Save Water”, INVITED Op-Ed, *New York Times*, Room for Debate, June 30, 2014. [Link](#)
  2. **Ajami, N.K.**, “Viewpoints: How should California pay for its water systems?”, Op-Ed, *Sacramento Bee*, Dec 21, 2013. [Link](#)
  1. Bredehoeft, J., **N.K. Ajami**, “Plan to Tap Groundwater for Profit Shows Need for Better State Policy”, Op-Ed, *Sacramento Bee*, April 13, 2012. [Link](#)
- For more on media coverage please see: <http://waterinthewest.stanford.edu/about/people/newsha-ajami>

### **LEGISLATIVE TESTIMONY**

2. **Ajami, N.K.**, “Overview of Urban Water Reuse and Recycling”, Testimony before the [California State Assembly Select Committee on Water Consumption and Alternative Sources](#), Hearing #3 on Urban Water Recycling and Reuse in California, California State Capitol, Sacramento, CA, Jan/2016.
1. **Ajami, N.K.**, “Funding Water in the Time of Uncertainty: The Case for a Public Goods Charge in California”, Testimony before the [California State Senate Natural Resources and water Committee](#), California State Capitol, Sacramento, CA, March/2016.

### **SELECT INVITED PRESENTATIONS**

#### *Invited Lectures and Keynote Talks*

- “Harnessing the Digital Revolution to Build the Water Sector of the Future”, *Building the Future: A Distinguished Lecture Series*, University of Michigan, April/2021.
- “Assessing the Human and Policy Dimensions of Water Resource Management by Harnessing Big Data”, *Civil and Environmental Engineering Seminar Series*, Western University, April/2021.
- “The Emerging Water Challenges of Wildfires in The Urban Wildland Interface”, *Toward a Sustainable 21st Century Series: Implementing and Scaling Resilient Solutions in Coastal California: Responding to Wildfire Impacts on Coastal Ecosystems*, UC Irvine, March/2021.
- “The Hidden Role of Water Infrastructure in Driving A COVID-19 Recovery”, *Water Environment Technology Talks*, Sustainable Silicon Valley, February/2020.
- “Sustainable Water Finance: An Imperative for Water Security and Economic Growth”, *NSF Research Coordination Network Seminar Series*, INFEWS/T3 RCN: City-as-Lab: A Research Coordination Network for the Study of the Food, Energy, and Water Nexus for Sustainable and Resilient Urban Development, February/2021.
- “Incorporating the Human Dimension and Behavioral Uncertainty into Water Infrastructure Planning”, *American Geophysical Union Fall Meeting*, Global Environmental Measurement and Monitoring Technologies: Current Capabilities and Future Needs: Session I - Water Technologies and Challenges, The GEMM Initiative Innovative Session-INV02, December/2020.
- “Building Water Resilience from the Bottom Up”, Closing Keynote, *MIT Water Summit*, A World of Water Reimagining Resilience, Panelist, “Effective Management of Water and Energy Tradeoffs”, Virtual, November/2020.
- “An Integrative Regional Resiliency Framework: Achieving Water Security through Collaboration”, *Bren School of Environmental Science and Management Fall Seminar Series*, UC Santa Barbara, November/2020.
- “Achieving Water Resilience in Developed Regions”, *Goalmakers 2020: 17 Rooms/7Cities Meeting*, Pacific Council, November/2020.
- “Driving Water Conservation: Detecting Consumption Patterns to Inform Conservation Actions”, *Association of Women in Water, Energy and Environment*, May/2020.
- “Building Water Security from the Bottom Up by Leveraging Big Data”, *Women in Data Science Conference*, Stanford University, Stanford, California, March/2020.



- “Assessing Human Uncertainty to Inform Smarter Infrastructure Decisions by Leveraging Big Data”, *The Global Energy and Water Exchanges (GEWEX)*, Scientific Steering Committee Meeting, Pasadena, California, January/2020.
- “Agile Service Delivery: Efficiency in Environmental Permitting Process”, *Asian Livable Cities Forum: Digital Solutions for Livable Cities*, San Francisco, CA, November/2019.
- “Building Resilient Communities in an Era of Water Scarcity”, *Graduate Program of Hydrologic Sciences Colloquium*, University of Nevada, Reno, November/2019.
- “Achieving Water Security by Harnessing the Data Revolution”, *Women in Data Science*, Stanford Earth, Stanford University, November/2019.
- “Leveraging Big Data to Inform Smarter Infrastructure Decisions Under Evolving Human Behavior”, Drought in the Anthropocene: Cascading Impacts, *LAHS Drought in the Anthropocene Workshop*, Arizona State University, October/2019.
- “Building a Water Resilient Bay Area in the Digital Era”, *Silicon Valley Leadership Group*, San Mateo, CA, October/2019.
- “A 21st Century Water Governance Model to Harness Digital Era in Support of the Water Sector’s Paradigm Shift”, *The Environmental and Water Resources Engineering program seminar series*, the University of Michigan, March/2019.
- “Harnessing the digital era to advance integrated water resource management”, *Stanford Woods Institute for the Environment seminar series*, February/2019.
- “Sustainable Water Finance: An Imperative for Water Security and Economic Growth”, *Department of Environmental Studies and Sciences seminar series*, Santa Clara University, January/2019.
- “HydroTrade: A New Concept for the Evolving Urban Water Infrastructure Model”, *American Geophysical Union Fall Meeting*, Washington DC, December/2018.
- “Governance Challenges: Emergency Services Coordination and Permitting”, *Collaborative Governance for Climate Resilience*, Stanford University, December/2018.
- “From Exploiting to Regenerating Natural Capital: Valuing and Regenerating Natural Capital”, Climate Actions for Impact, *Global Climate Action Summit*, September /2018.
- “Governing California’s Urban Water Under the 21st Century”, *3rd California Water Boards Science Symposium: Adapting in the Face of Disruptive Landscape Change*, Sacramento, CA, June/2018.
- “Coping with Droughts: The Role Of Political Action And Media in Engaging the Public to Address Water Scarcity”, *3rd Annual Darcy Aston Memorial Lecture*, Environmental Studies Program, UC Santa Barbara, Santa Barbara, CA, May/2018.
- “Governing California’s Urban Water Under the 21st Century Climatic and Social Realities”, *Foro Internacional del AGUA de Monterrey*, Monterrey, Mexico, May/2018.
- “Financing Water Infrastructure”, *Center for Neighborhood Technology Webinar*, April/2018.
- “Water Data for Leaders: How Big Data can Save Money and Water”, *WaterNow Alliance Third Annual Summit: Accelerating Innovation*, Salt Lake City, UT, March/2018.
- “Bay Area Regional Partnerships for Potable Reuse”, *Bay Area Regional Partnerships for Sustainable Water: Part 1 Potable Reuse*, Stanford University, March/2018.
- “Enhancing Regional Water Reliability and Diversification through Water Trading”, Silicon Valley Leadership Group, San Jose, CA, February/2018.
- “Creating Resilience Under our New Climatic and Social Realities”, *Planning for America’s Water Infrastructure Needs*, Stanford University, February/2018.
- “A 21st Century Financing Framework to Support Water Sector Paradigm Shift”, *UCI Water Center Seminar Series*, Irvine, CA, January/2018.
- “Water Trading To Promote Supply Diversification And Enhance Regional Reliability”, *East Bay Leadership Council- Water Task Force meeting*, Walnut Creek, CA. January/2018.

- “Creating Resiliency under our New Climate Reality” No Drop Left Behind: Smart & Sustainable Water Strategies, *Sustainable Silicon Valley Fall Meeting*, Sunnyvale, CA, December/2017.
- “A New Governance Regime for the Evolving Urban Water Infrastructure”, *Conference on Urban Infrastructure: Analysis and Modeling for their Optimal Management and Operation*, New York Institute of Technology, New York, NY, November/2017.
- “Demand-Based Solutions: Advancing Urban Water Management”, *Greater Vision 2017: New Frontiers Water Forum*, CSU Monterey Bay, October/ 2017.
- “Financing Storm Water Projects: Providing an Innovative Vision”, *Natural Capital Project Open House*, Stanford University, October/2017.
- “Water-Energy Nexus in California”, Integrating Energy-Water Nexus: How data can help achieve creative natural resources efficiencies, *Second California Water Data Summit*, Stanford University, August/2017.
- “Financing the Shifting Paradigm in the Water Sector”, *4th Annual California Water Summit*, Sacramento, CA, June/2017.
- “Progressive Planning for Financially Robust Water Systems: Financing Framework for the Shifting Paradigm”, Canadian Water Network, *Blue Cities*, Toronto, Canada, May/2017.
- “Implementing the 21st Century Water Strategy”, *Santa Ana River Watershed Conference*, Ontario, CA, May/2017.
- “An Innovative Financing Framework for the Water Sector”, International Development Bank/Government of Jamaica, *Conference on Financing Water Utilities of the Caribbean*, Jamaica, May/2017.
- “Innovative Financing Framework for Distributed Stormwater Infrastructure”, *EPA Stormwater Financing Forum*, Oakland, CA, April/2017.
- “Green Streets and Financing Dilemma”, Opening Remarks, *Regional Roundtable: Sustainable Streets*, Urban Greening Bay Area, Oakland, CA, March/2017.
- “Introduction to the Public Goods Charge”, *Sierra Summit*, Interest on a Past-Due Bill: Funding Watershed Restoration and Forest Health, Sierra Nevada Conservancy, Sacramento, CA, March/2017.
- “Stormwater: Challenges or Opportunities”, *ACWA 2016 Fall Conference and Exhibition*, December/2016
- “Role of Big Data in Urban Water Policy Innovation”, Stanford Graduate School of Business Water Data Summit: Academic Panel, Stanford University, September/2016.
- “Role of Innovation in Water Supply Diversification”, Keynote, *Workshop on Water Resource Management in the 21st Century*, Sharif University, Tehran Iran, July/2016.
- “Facing 21st Century Water Challenges in California: Rethinking Management Strategies”, *Stanford Club of San Ramon Valley - Spring Dinner and Lecture*, San Remon, CA, April/2016.
- “Rethinking Water Resource Management in the 21<sup>st</sup> Century”, Keynote, *The 14<sup>th</sup> Conference on International Exchange of Professionals Global Intelligence Forum*, Shenzhen, Guangdong Province, China, April/2016.
- “Diversification of California’s Water Supply: Overview of Urban Water Reuse and Recycling”, Keynote, *First Sino-America Land Engineering cooperation Conference*, Xian, China, April/2016.
- “Alternative Ways to Fund Water Projects: Looking to the Electricity Sector for Guidance” *How to Fund Groundwater Sustainability Symposium*, Groundwater Resources Association of California, Sacramento, California, March/2016.
- “Guiding Water Sector’s Path to Innovation: Economic Correlation Between the Water and Clean Energy Sectors”, *2015 Summit on Safe Drinking Water from Every Tap*, Research Triangle Environmental Health Collaborative, Raleigh, NC, October/2015.
- “Economic and Environmental Correlation Between the Water and Energy Sector: The Water Sector’s Path to Innovation”, *Energy and Water Nexus Summit 4*, Bay Planning Coalition, September/2015.
- “Facing California’s Water Challenges: A Balancing Act Between Human and Environmental Needs”, *U.S. - Iran workshop on Environmental and Water Resources Management Issues of Inland Lakes: Sharing experiences and opportunities from Iran’s Urmia Basin and the Southwest U.S.*, UC Irvine, Irvine CA, June/2015.

- “Rethinking California’s Water Portfolio: Introducing Innovative Solutions to our Water Challenges”, *Israel Water Technology: Opportunities for California*, Sacramento, CA, June/ 2015.
- “Funding Water Innovation”, World Water Day: Cities To Cities Dialogues, *Water Tech for Resilient Cities*, US Water Partnership and Inter-American Development Bank, Washington DC, March/2015.
- “The Water Sector’s Path to Innovation”, *East Bay Leadership Council*, March/2015.
- “Solving California’s Water Problem”, *Australian Delegation*, Stanford University, January/2015.
- “Drought A Challenge or an Opportunity: Rethinking Water Resource Management in California”, *Conference on Water and Public Health*, Sao Carlos, Brazil, Decemeber /2014.
- “Climate Change and California's Water Resources”, *Symposia I: Water Issues in Climate Change*, UC San Diego, April/2013.
- “Translating Water Science into Effective Public Policy”, *Symposia I: Water Issues in Climate Change*, UC San Diego, April/2013.
- “Twenty First Century Governance Strategies to Empower Communities”, *Multi Scalar and Cross Disciplinary Approaches towards Equitable Water Governance Conference*, National Science Foundation Workshop in Cultural Anthropology, Center for Global, International and Regional Studies (CGIRS), UC Santa Cruz, February/2013.
- “Rethinking Water Resource Management in California”, *University of Geneva and the World Economic Forum Debate Series*, March/2012.
- “All the answers to water supply and demand: why should we use climate data in forecasting water supply?”, Delta Stewardship Council, *Delta Science Program*, January/2011.
- “Integrated uncertainty estimation for distributed hydrological models”, *European Geosciences Union*, Vienna, Austria, April/2007.
- “Impacts of uncertainty in efficient management of California’s water resources”, *California Water and Environmental Modeling Forum*, Asilomar CA, February/2007.
- “Advances in Semi-Distributed Watershed Modeling”, Presentation, *American Geophysical Union*, Nice, France, Apr/2003.
- Panel Discussions and Moderation
- MIT Water Summit, A World of Water Reimagining Resilience, Panelist, “Effective Management of Water and Energy Tradeoffs”, Virtual, November/2020.
- World Water Tech Innovation Summit, Moderator, “Water Quality: Protecting Public Health”, Virtual, October/2020.
- Stockholm Environment Institute, US Water Program Webinar, Panelist, “Water and food security in the face of COVID-19: Finding robust solutions”, June/2020.
- World Water Tech Innovation Summit, Moderator, “CEO Forum: Innovating to Thrive in a Digital World”, Los Angeles, California October/2019.
- San Luis Obispo County Housing Summit, Panelist, March/2019.
- World Water Tech Innovation Summit, Panelist, “Policy, regulation and Technology: Driving Forward Co-operative Innovation”, London, England, February/2019.
- MIT Water Summit: Thirsty Cities, Panelist, “How to Design a City from Scratch”, Boston, Massachusetts, November/2018.
- World Affairs Council, Moderator, “When A City Runs Dry: What Cape Town Can Tell Us About the Future of Water”, *Conversations That Matter*, San Francisco, CA, April/2018.
- WaterNow Alliance Annual Summit: Accelerating Innovation, Panelist, “Water Data for Leaders: How Big Data can Save Money and Water”, Salt Lake City, Utah, March/2018.
- U.S. Department of State, Moderator, “Innovative Finance for Global Water Needs and U.S. Role”, *World Water Day Forum*, March/2018.

Water Innovation Forum, Conversation leader, “Finance – Solving internal and external financial challenges”, San Francisco, CA, March/2018.

SPUR Urban Center Evening Forum, Panelist, “Water, Water (Not) Everywhere”, San Francisco, CA, February/2018.

Alliance for Water Efficiency meeting, Panelist, “Market Driven Platforms for Water Conservation”, San Jose, CA, September/2017.

Second California Water Data Summit, Panelist, “Streamlining Data Sharing to Improve the State of Water Efficiency Research and Support Water Managers in Adapting to the New Normal”, Stanford University, August/2017.

Sierra Summit, Moderator, “Watershed Investment Discussion: Public Goods Charge”, Interest on a Past-Due Bill: Funding Watershed Restoration and Forest Health, Sierra Nevada Conservancy, March/2017.

The Hutchins Center on Fiscal & Monetary Policy, Panelist, “Trump and Infrastructure: Where Should the Money Go”, From Bridge to Education: Best Bets for Public Investment”, *Brookings Institute*, January, 2017

The Association of California Water Agencies, Panelist, “Stormwater as a Resource: Opportunities and Challenges”, Fall Conference and Exhibition, December/2016.

Sustainable Silicon Valley, Panelist, “Innovative Financing”, Winter Water Workshop: Collaboration and Connection, December 2016.

Society of Environmental Journalists Annual Conference, Panelist, “Water in a Time of Scarcity: Adapting to Drought”, September /2016.

German Consulate *Water Panel*, Panelist, September/2016.

Stanford Graduate School of Business *Water Data Summit*: Academic Panel, September/2016.

Energy and Sustainability Summit, Panelist, “Innovative Technologies and Corporate Leadership to Address the CA Drought”, Silicon Valley Leadership Group, , June/2016.

Spring Water Symposium: Resilience and Reuse, Panelist, “An Integrated Approach to Bay Area Water: Conservation, Efficiency, Centralized Treatment and Onsite Reuse”, Sustainable Silicon Valley, May/2016.

Stanford University, Panelist, “The California Drought: Year 4 | A Discussion of the Origins, Policy Implications, and Long-Term Strategies for California's Ongoing Drought”, , May/2016.

Panelist, “From the Promised Land to the Golden State: Shifting the Water Paradigm”, *Jewish High Tech Community*, San Jose, CA, April/2016.

National Governors Association, Panelist, “Experts Roundtable on State Opportunities to Improve the Energy-Water Nexus”, Washington DC, Feb/2016.

The White House, *Roundtable on Water Innovation*, Panelist, Washington DC, Dec/ 2015.

San Luis Obispo Chamber of Commerce, *State of the State*, Panelists, San Luis Obispo, CA, May/2015 ( Shared panel with Senator Bill Monning and Mayor Chuck Reed-former mayor of San Jose).

Energy and Climate Change, Panelist, “The Water Energy Nexus: Collaboration for Increased Impact”, *15th National Conference and Global Forum on Science, Policy and the Environment*, Washington DC, January/2015.

### **OTHER PRESENTATIONS**

Bolorinos, J, NK Ajami, Y. Yu, R. Rajagopal (2016), “Integrating water use into Southern California’s power dispatch: an evaluation of the potential for cost-effective water conservation”, AGU 2016, San Francisco, CA.

Gonzales, P., Y. Sun, **N.K. Ajami** (2016), “Trading Water Conservation Credits: A Coordinative Approach to Drought Response”, AGU 2016, San Francisco, CA.

- Quesnel, K., N. Roby, P. Gonzales, N.K. Ajami (2016), “The Role of Political Action and Media in Increasing Public Awareness of Water Scarcity: Combined Effects on Residential Water Use Behavior”, AGU 2016, San Francisco, CA.
- Ajami, N.K.**, C. Gu, “Complexity and uncertainty in soil Nitrogen modeling”, American Geophysical Union, San Francisco, CA, Dec/2009.
- Ajami, N.K.**, D.L. Sunding, G.M. Hornberger, “Economic value of accurate assessment of hydrological uncertainty”, American Geophysical Union, San Francisco, CA, Dec/2008.
- Ajami, N.K.**, D.R. Purkey, “Overview of WEAP-Water Evaluation and Planning System”, Applications of WEAP Model in Water Resources Planning and Management in IRAN, Tehran University, Tehran, Iran, August/2008.
- Ajami, N.K.**, G.M. Hornberger, “End To End Uncertainty Estimation: From Hydrology To Water Resource Management”, American Geophysical Union, San Francisco, CA, Dec/2007.
- Ajami, N.K.**, “Assessment of uncertainty in semi-distributed hydrological models”, American Geophysical Union, San Francisco, CA, Dec/2006.
- Ajami, N.K.**, Q. Duan, S. Sorooshian, “An Integrated Bayesian Uncertainty Estimator: fusion of Input, Parameter and Model Structural Uncertainty Estimation in Hydrologic Prediction System”, presentation, American Geophysical Union, San Francisco, CA, Dec/2005.
- Ajami, N.K.**, Q. Duan, S. Sorooshian, P. Dufy, “Confronting Total Uncertainty in Hydrologic Prediction: An Integrated Bayesian Multi-Model Hydrologic Ensemble Prediction System”. Presentation, International workshop on Hydrometeorological and Hydrologic Ensemble Prediction, Boulder, CO, July/2005.
- Ajami, N.K.**, Q. Duan, X. Gao, S. Sorooshian, “Application of Multi-Model Superensemble technique to flood forecasting through distributed hydrologic models”, presentation, American Geophysical Union, San Francisco, CA, Dec/2004.
- Khodatalab, N.**, H. Gupta, S. Sorooshian “Semi Distributed Modeling Approach And Calibration Strategies”, Presentation, The 13<sup>th</sup> annual Day of Water “El Dia del Agua”, Apr/2003.
- Khodatalab, N.**, H. Gupta, S. Sorooshian, “Distributed Hydrologic Modeling for Flow Forecasting By Using NEXRAD data”, Poster Presentation, American Geophysical Union, May/2002.

### **CONFERENCE PROCEEDINGS**

- Ajami, N.K.**, Q. Duan, H. Moradkhani, S. Sorooshian, “Recursive Bayesian Model Combination for Streamflow Forecasting”, proceeding of American Meteorological Society, San Diego, CA, Jan/2005.
- Moradkhani, H., **N.K. Ajami**, K.L. Hsu, S. Sorooshian, “On Particle Filtering Monte Carlo Approach to Sequential Hydrometeorological Data Assimilation”, proceeding of American Meteorological Society, San Diego, CA, Jan/2005.
- Karamouz, M, **N. Khodatalab**, S. Araghy Nejad, “Multipurpose Reservoir Operation Optimization: Application of Genetic Algorithm”, Proceeding of AWRA Water Resources Management, Roanoke VA, May /2002.
- Karamouz, M., B. Zahraie, **N. Khodatalab**, “A Decision Support System for Operation of Dez and Karon Reservoirs”, Proceedings of ASCE Water Resources Planning and Management, Minneapolis, MN, May/2000.

### **BOARD AND ADVISORY COUNCIL MEMBERSHIP**

- Blue Forest Conservation, Board Member 2019-Present
- Data Science Advisory Panel, California State Water Board 2019-Present
- Expert Advisory Panel, Santa Clara Valley Water District Climate Change Action Plan

- Delta Science Program, Science Advisory Committee 2018-Present
- Sustainable Silicon Valley, Advisory Council Member 2018-Present
- Pacific Council, Water Scarcity Program, Steering Board member 2016-Present
- Pacific Council, Water Scarcity Program, Steering Board member 2016-Present

### TEACHING EXPERIENCE

**EARTHSYS 106/206 : Sustainable and Equitable Water Management** – Winter Quarter : The class focuses on how equitability can be incorporated into Sustainable Groundwater Management as a fundamental element.

**Public Policy Practicum** –Winter and Spring Quarters: The class focuses on analyzing various water related projects and prepare a report related to their findings.

**EARTHSYS 140: The Energy-Water Nexus** – Delivered two lectures on Water-Energy Nexus

**EE 292H: Engineering and Climate Change** – Delivered one lecture on Water in California

**Teaching Assistant**, University of Arizona 2002-2003

- **The Water Cycle:** Taught lab sessions, prepared lectures, graded assignments and final
- **Persian as a Second Language:** lecturer, held review sessions, prepared homework and exams

### FUNDED PROJECTS

National Science Foundation, “INFEWS/T3 RCN: City-as-Lab: Research Coordination Network for the Study of the Food, Energy, and Water Nexus for Sustainable and Resilient Urban Development”, Academic teams: NY Institute of Technology, Stanford, NY University, UT Austin, Arizona State University, (\$750K)

Environmental Venture Projects, Stanford University, “Water and Energy Household Consumption Lifestyles from Hourly Data: Program and Policy Implications for Demand Management”, (\$200K)

Sonoma County Water Agency, “Water Trading to Promote Supply Diversification and Enhance Reliability of the Sonoma Region”, (\$60K)

Bay Area Water Supply and Conservation Agency, “Coping with The Drought: Factors Impacting Water Demand Reduction in The Bay Area”, (\$25K)

California Energy Commission, “In-conduit hydropower implementation guidebook: A compendium of resources, best practices and tools”, Team members: Newsha Ajami, Richard Luthy (Stanford University), Matthew Swindle (NLine Energy), Mohammad Badruzzaman (MWH), (\$300K)

EVP planning grant, “Improving Integrated Regional Water Management in California”, Team members: Bruce Cain, Newsha Ajami, Mary Spauge, and Iris Hui, Richard Luthy. (\$25K)

PIE grant, “Towards a US-Mexico Research Collaborative on the Energy-Water Nexus in the Context of Climate Change”. Team members: Bruce Cain, Newsha Ajami, Rob Jackson. (\$200K)

California Water Foundation, “Public Benefits Charge for Water”, (\$23K)

Abu Dhabi Ministry of Foreign Affairs and Masdar Institute, “Global Water Governance in the 21<sup>st</sup> century”, (\$80K)

Crown Prince Court of Abu Dhabi, “Transformational Ideas to Enhance Water Security”, (\$120K)

### PROFESSIONAL AFFILIATIONS

- Society of Women Engineers (SWE)
- American Geophysical Union (AGU)

- Engineers for a Sustainable World (ESW)

### **LANGUAGES SKILLS AND HOBBIES**

- Farsi (Native), English (Fluent), Turkish/Azari (Basic)
- Poetry, Piano, Skiing, Tennis, Yoga, Travelling

### **STUDENT ADVISING AND MENTORING**

#### **Post-Doctoral Advisees/Mentees**

- Dr. Philip Womble, August 2020-Present
- Dr. Courtney Hammond Wagner, March 2020-Present
- Dr. Xiaogang He, March 2019-Present
- Dr. Josh Dimon, January 2018-Present
- Dr. Charles Regnacq, January 2019-2020
- Dr. Kimberly Quensel, September 2019-2020

#### **Ph.D. Students**

- Patricia Gonzales, Environmental Engineering, Stanford University, “Enhancing Resilience of Urban Water Systems: Coordinating Regional Water Management to Enable Innovation and Prompt Collective Action” (2014- 2018)
  - NSF GRFP
  - Rising Environmental Leader, Stanford Woods Institute
  - Outstanding Student Paper Award, American Geophysical Union
- Kim Quesnel, Civil and Environmental Engineering, Stanford University, “Harnessing Emerging Data Sources to Uncover New Dimensions of Human-Water Dynamics During Drought” (2015-2019)
  - EPA STAR
  - Rising Environmental Leader, Stanford Woods Institute
  - Water Innovation Policy Fellowship, Imagine H2O
  - Best Student Presentation, American Water Resources Association annual conference
- Jose Bolorinos, (Co-advised by Ram Rajagopal)- Civil and Environmental Engineering, Stanford University, “Water and energy spillovers: Behavioral and technological opportunities for improved urban resource demand management under scarcity”, (2017-Present)
- Gemma Smith, Emmett Interdisciplinary Program in Environment and Resources, “Data-Driven Water-Energy Sustainability and Resiliency Performance Metrics”, (2018-2020)
- Kyle Blount, (Co-advised by Terri Hogue- CSM) - Civil and Environmental Engineering, Colorado School of Mines, “Assessing the Impacts of Hydrologic Disturbances on Urban Water Supply and Demand in the Western United States”, (2017-2020)
- Beatrice Gordon, (Co-advised by Adrian Harpold - UNR) – Department of Natural Resources and Environment, University of Nevada, Reno, “Socio-Hydrologic Assessment of Agricultural Vulnerability to Changing Snowmelt”, (2019-Present)

#### **M.S. Students**

- Kim Quesnel (2014-2015)
- Nick Roby, (2015-2017)
- Jose Bolorinos (2015-2017)
- Yujie Sun (2016)
- Robin Abs (2017-2018)
- Saahil Agrawal (2017-2019)
- Ananth Sundararaman (2018-2019)
- Cecily Wang (2018-2019)

- Lauren Block (2018-2020)
- Gemma Smith (2017)
- Catalina Gonzalez-Harvard University-(2019-2020) - Serving as her thesis director
- Ziyang Wu (2019-Present)
- Zuha Shaikh (2019-Present)
- Marie Philin Becker - Technische Universität Berlin (2020-Present) -Co-advising with Andrea Cominola
- Hunter Johnson (2020-Present)
- Yash Gaur (2020-Present)

## REFERENCES

### **Professor Steven Gorelick**

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### **Professor George M. Hornberger**

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### **Professor Sharon Walker**

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**Professor Soroosh Sorooshian (PhD Advisor)**

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