

Koorosh Azizi

Postdoctoral Fellow

Jackson School of Geosciences

The University of Texas at Austin



(901) 608-8034



koorosh.azizi@austin.utexas.edu



[Google Scholar Profile](#)



[LinkedIn Profile](#)

APPOINTMENTS

- June 2024 - Present **Postdoctoral Fellow**
The University of Texas at Austin - Jackson School of Geosciences and LBJ School of Public Affairs, Austin, TX
Advisors: Dr. Patrick Bixler, Dr. Dev Niyogi, Dr. Jay Banner
- June 2022 – June 2024 **Postdoctoral Research Scholar**
Arizona State University - School of Sustainable Engineering and Built Environment, and Julie Ann Wrigley Global Institute of Sustainability, Tempe, AZ
Advisors: Dr. Margaret Garcia, Dr. John (Marty) Anderies
- Sep. 2017 – May 2022 **Research Assistant**
The University of Memphis - Department of Civil Engineering, Memphis, TN

EDUCATION

- Sep. 2017 – May 2022 **PhD, Civil Engineering, Water Resources Engineering**
The University of Memphis, Memphis, TN, USA
Dissertation: Application of Local Knowledge for Better Characterization and Modeling of Urban pluvial flooding
Advisor: Dr. Claudio I. Meier
- Sep. 2014 – Jan. 2017 **MSc, Civil Engineering, Water Resources Engineering**
Shahid Beheshti University, Tehran, Iran
Thesis: Optimization of Piano-Key Weirs Using Metaheuristic Algorithms
Advisor: Dr. Jalal Attari
- Sep. 2010 – Sep. 2014 **BSc, Civil Engineering**
Isfahan University of Technology, Isfahan, Iran

MANUSCRIPTS UNDER REVIEW OR REVISION

4. **Azizi**, K., Bixler, P., & Passalacqua, P. Gaps and opportunities for collaborative flood governance: Network-analytic insights from the US gulf coasts. Under review, *Water Resources Research*.
3. **Azizi**, K., Wang, Y., Enriquez, O., Passalacqua, P., Niyogi, D., & Bixler, P. Integrating Perspectives: Multi-Sectoral Insights into Gulf Coast Flood Governance. Under Review, *International Journal of Disaster Risk Reduction*.
2. Garcia, M., Anderies, J., Deslatte, A., Hornberger, G., Koebele, E. G., Alonso Vicario, S., **Azizi**, K., Barnes, J., & Wiechman, A. Fit to keep pace with change? Archetypes of urban water systems. Under review, *Nature, Sustainability*.
1. **Azizi**, K., Garcia, M., Niyogi, D., & Bixler. Coupled Human–Infrastructure Systems: Socio-Behavioral and Spatial Dynamics in Green Stormwater Infrastructure Adoption. Under review, *Nature Cities*.

PEER-REVIEWED PUBLICATIONS

13. **Azizi**, K., Barnes, J., Deslatte, A., Koeble, E., G., Anderies, J., & Garcia, M. (2024). Balancing Effectiveness and Equity in Sustainable Water Management Transitions: The Case of the Miami-Dade Water and Sewer Department. *Journal of Water Resources Planning and Management*, 151(1), 04024058.
12. **Azizi**, K., Barnes, J., Anderies, J., & Garcia, M. (2024). Efficient Water Conservation Programs and Equity Implications. *Environmental research letters*. 19: 094015.
11. **Azizi**, K., Hornberger, G., Baggio, J., Koeble, E., Anderies, J., & Garcia, M. (2024). Identifying Conditions that Support the Provision of High-Quality and Affordable Urban Drinking Water in the US. *Journal of Water Resources Planning and Management*, 150(8), 04024024.
10. Wiechman, A., Alonso-Vicario, S., Anderies, J.M., Garcia, M., **Azizi**, K., Hornberger, G. (2024). Institutional dynamics impact the response of urban socio-hydrologic systems to supply challenges. *Water Resources Research*, 60(2), e2023WR035565.
9. Ebrahimi, S., **Azizi**, K., Kashani, A.R., & Ali, A. (2024). Evaluation of water quality models for hydrological variability using event-based scenarios: A case study. Evaluation of hydrological variabilities of water quality models considering event-based scenarios: A case study. *Stochastic Environmental Research and Risk Assessment*, 1-25.
8. **Azizi**, K., Diko, S., & Meier, C. I. (2023). A Citizen Science Approach to the Characterisation and Modelling of Urban Pluvial Flooding. *Water Alternatives*, 16(1), 1.
7. **Azizi**, K., Diko, S. K., Saija, L., Zamani, M. G., & Meier, C. I. (2022). Integrated community-based approaches to urban pluvial flooding research, trends and future directions: A review. *Urban Climate*, 44, 101237.
6. **Azizi**, K., & Meier, C. I. (2022). Urban Pluvial Flood Risk Assessment: Challenges and Opportunities for Improvement Using a Community-Based Approach. In *World Environmental and Water Resources Congress 2021* (pp. 350-361). Reston, VA: American Society of Civil Engineers.
5. **Azizi**, K., Kashani, A. R., Ebrahimi, S., & Jazaei, F. (2022). Application of a multi-objective optimization model for the design of piano key weirs with a fixed dam height. *Canadian Journal of Civil Engineering*, 49(11), 1764-1778.
4. Kashani, A. R., Camp, C. V., **Azizi**, K., & Rostamian, M. (2021). Multi-objective optimization of mechanically stabilized earth retaining wall using evolutionary algorithms. *International Journal for Numerical and Analytical Methods in Geomechanics*, 46(8), 1433-1465.
3. Kashani, A. R., Gandomi, A. H., **Azizi**, K., & Camp, C. V. (2021). Multi-objective optimization of reinforced concrete cantilever retaining wall: a comparative study. *Structural and Multidisciplinary Optimization*, 65(9), 262.
2. Kashani, A. R., Camp, C. V., Rostamian, M., **Azizi**, K., & Gandomi, A. H. (2020). Population-based optimization in hydro structural engineering: a review. *Artificial Intelligence Review*, 1-108.
1. **Azizi**, K., Attari, J., & Moridi, A. (2017). Estimation of discharge coefficient and optimization of Piano Key Weirs. In *Labyrinth and Piano Key Weirs III*. CRC Press.

PRESENTATIONS – CONFERENCE (FIRST AUTHOR ONLY)

10. **Azizi**, K., Passalacqua, P., & Bixler, P. (2024). Perceptions and Partnerships: Insights from Flood Risk Governance in Southeast Texas Through Network Analysis. In AGU Fall Meeting Abstracts.
9. **Azizi**, K., Barnes, J., Deslatte, A., Koeble, E., G., Anderies, J., & Garcia, M. (2023). Equity and Effectiveness in Sustainable Water Management Practices: Insights from Miami-Dade's Water Conservation Program. In AGU Fall Meeting Abstracts.

Koorosh Azizi - Curriculum Vitae

8. **Azizi, K.**, Hornberger, G., Baggio, J., Koeble, E., Anderies, J., & Garcia, M. (2023). Identifying Key Factors for Providing High-Quality and Affordable Drinking water: A Study of U.S. Urban Water Systems. In AGU Fall Meeting Abstracts.
7. **Azizi, K.**, & Meier, C. I. (2022). Improving Urban Pluvial Flooding Characterization and Modeling Through a Citizen Science Approach. In AGU Fall Meeting Abstracts (Vol. 2022, pp. H15T-1032).
6. **Azizi, K.**, Meier, C.I. (2022). Citizens' contributions improve modeling of urban pluvial flood: A case study. In EWRI Congress, 2022, Atlanta.
5. **Azizi, K.**, Meier, C. I., & Saija, L. (2020). Improving the Characterization of Urban Flash Floods through Application of Local Knowledge. In AGU Fall Meeting Abstracts (Vol. 2020, pp. H162-0011).
4. **Azizi, K.**, Meier, C. I., & Saija, L. (2019, December). Applying the socio-hydrological approach in understanding and managing urban stormwater: A case-study in North Memphis. In AGU Fall Meeting Abstracts (Vol. 2019, pp. H11O-1732).
3. **Azizi, K.**, Meier, C.I., & Saija, L. (2019). Stormwater Management at Local Level: Participatory Community-Based Strategies and Mitigation Practices. In EWRI Congress, 2019, Pittsburg.
2. **Azizi, K.**, Meier, C. I., & Saija, L. (2018). Bottom-Up Planning: From Natural Disaster to Community Disaster. In AGU Fall Meeting Abstracts (Vol. 2018, pp. PA23F-1032).
1. **Azizi, K.**, Attari, J., & Moridi, A. (2017). Estimation of discharge coefficient and optimization of Piano Key Weirs. In Labyrinth and Piano Key Weirs III: Proc. of the 3rd International Workshop on Labyrinth and Piano Key Weirs (PKW 2017).

INVITED TALKS AND LECTURES

1. **James Madison University**, School of Integrated Sciences, Seminar Series, March 4, 2025.
2. **Colorado State University**, Department of Systems Engineering, Department Seminar Series, December 3, 2024.
3. **University of South Florida**, Department of Geosciences, Department Seminar Series, February 28, 2024.
4. **Pennsylvania State University**, Department of Geosciences, Department Seminar Series, November 27, 2023.
5. **Arizona State University**, School of Sustainability, Sustainability Seminars, April 15, 2023.
6. **Nebez Academy**, Natural Sciences Seminars, October 12, 2023.
7. **University of Memphis**, Department of City and Regional Planning, Department Seminar Series October 1, 2023.
8. **Arizona State University**, School of Sustainable Engineering and the Built Environment, Hydrosocial Seminars September 15, 2023.

ACADEMIC TEACHING EXPERIENCE

Arizona State University, School of Sustainable Engineering and the Built Environment

Guest Lecturer, Hydrology Fall 2022, Fall 2023

- Developed and delivered lectures on core hydrology concepts, including flood frequency analysis and hydrological modeling.
- Facilitated class discussions, engaged students with interactive teaching methods, and addressed academic inquiries.

Guest Lecturer, Sociohydrology Spring 2023

Koorosh Azizi - Curriculum Vitae

- Designed and presented course content focused on the interplay between social systems and hydrological processes.

The University of Memphis, Department of Civil Engineering, Memphis, TN, USA

Workshops On Urban Hydrological Modeling 2021-2022

Hydrology 2019-2021

- Collaborated with the professor to design and update course curriculum and materials.
- Conducted several sessions independently, facilitating class discussions and resolving student queries.
- Assisted in grading and providing constructive feedback on assignments and exams.

Hydrology Lab 2015-2016

- Led lab sessions, demonstrating practical applications of hydrology principles.
- Assisted students in conducting experiments and interpreting results.
- Collaborated in the creation and grading of lab reports.

Shahid Beheshti University, Tehran, Iran

Hydraulics, 2014 – 2016

- Created and delivered course material for undergraduates.
- Graded assignments, projects, and exams, providing constructive feedback to students.
- Adapted teaching methods to meet students' varying needs and interests, promoting interactive learning.

Hydraulic Design of Structures, 2016 – 2017

- Led lectures and class discussions, fostering an engaging and intellectually stimulating environment.
- Graded exams and projects, providing individual feedback to improve student understanding.
- Designed class materials and assignments to apply theoretical concepts into practice.

STUDENT MENTORSHIP

- Nischal Kafle (PhD)
Urban Flood Management and Green Infrastructure. Fall 2021 – Fall 2023
PhD, Civil Engineering, University of Memphis
- Samin Khorram (PhD)
Watershed Modeling. Fall 2021 – Fall 2023
PhD, Civil Engineering, University of Memphis
- Sara Alonso Vicario (PhD)
Hydrological Analysis. Fall 2022 – Spring 2024
PhD, Civil Engineering, Arizona State University
- Francesca Federico (PhD)
Risk Sharing and Climate Insurance Program. Spring 2023 – Spring 2024
PhD, Sustainability, Arizona State University
- Karissa Gund (MS)
Hydrological Variability and Flow Regime. Fall 2022 – Fall 2023
MS, Civil Engineering, Arizona State University

GRANTS AND FELLOWSHIPS

- **National Science Foundation (Senior Personnel)**
Dynamics of Integrated Socio-Environmental Systems (DISES): Closing the feedback loop: Navigating robustness-fragility tradeoffs in polycentric urban water systems (2023, not funded)
- **National Science Foundation (Senior Personnel)**
Dynamics of Integrated Socio-Environmental Systems (DISES): A transdisciplinary, transformative citizen-science approach for enhancing understanding of, and interventions to, urban pluvial flooding (2020, not funded)
- **Internal Seed Grant University of Memphis (Senior Personnel)**
Urban Flood Resilience in Memphis (2018) - \$50000
- **Herff Graduate Fellow**, University of Memphis, Herff College of Engineering (2017) - \$51000
- **Travel Grant**, American Geophysical Union Conference participation (2019) - \$1200
- **Travel Grant**, World Environmental and Water Resources Congress Conference participation (2019) - \$1000
- **Travel Grant**, American Geophysical Union Conference participation (2018) - \$1200
- **Travel Grant**, World Environmental and Water Resources Congress Conference participation (2018) - \$1000

PEER REVIEW ACTIVITIES

- Reviewer for Journal of Infrastructure Systems
- Reviewer for Journal of Water Resources Planning and Management
- Reviewer for Environmental Research Letters
- Reviewer for Environmental Research: Infrastructure and Sustainability
- Reviewer for Environmental Research: Climate
- Reviewer for Environmental Research: Water
- Reviewer for Journal of Flood Risk Management
- Reviewer for Journal of Hydrologic Engineering
- Reviewer for Urban Water Journal
- Reviewer for Theoretical and Applied Climatology
- Reviewer for Sustainability
- Reviewer for Urban science
- Reviewer for Urban Climate
- Reviewer for Water
- Reviewer for Journal of Hydroinformatics

PROFESSIONAL MEMBERSHIPS/AFFILIATIONS

- American Geophysical Union
- American Society of Civil Engineers

TECHNICAL SKILLS AND COMPETENCIES

Quantitative Research Skills:

- Proficient in Statistical Analysis, Survey Design & Analysis, and Data Tracking.

Koorosh Azizi - Curriculum Vitae

Qualitative Research Skills:

- Experienced in conducting User Interviews, facilitating Focus Groups, carrying out Field Studies, and practicing Ethnography.

Software Proficiency:

- Skilled in the use of SWMM, PCSWMM, HEC-RAS, HEC-HMS, IBER, FLO-2D, ArcGIS, QGIS, and AutoCAD.

Programming Expertise:

- Proficient in R, Python, MATLAB, and Julia programming languages.

Interpersonal and Cognitive Skills:

- Strong presentation and communication skills, both verbal and written.
- Proven ability in teamwork, maintaining punctuality, and demonstrating flexibility.
- Proficient in Systems Thinking and Critical Thinking with a keen intellectual curiosity.

LANGUAGES

- **English:** Fluent (spoken and written)
- **Persian:** Fluent (spoken and written)
- **Kurdish:** Native Speaker

EXTRACURRICULAR ACTIVITIES

- Arizona Hiking Club, 2022 – 2024
- UoM IM Soccer, 2017-2022

REFERENCES

1. **Claudio I. Meier** (PhD Committee Chair, 7 years known):
Associate Professor, Department of Civil Engineering, University of Memphis, TN, USA
Tel: +1 (901)297-8855, Email: cimeier@memphis.edu
2. **Margaret Garcia** (Postdoc advisor, 2.5 years known):
Associate Professor, School of Engineering and the Built Environment, Ira A. Fulton Schools of Engineering, Arizona State University, AZ, USA
Tel: +1 (480)965-8838, Email: m.garcia@asu.edu
3. **R. Patrick Bixler** (Postdoc advisor, 1 year known):
Assistant Professor, LBJ School of Public Affairs, The University of Texas at Austin, Austin, TX, USA
Tel: +1 (512)471-3988, Email: rpixler@austin.utexas.edu
4. **John (Marty) Anderies** (Postdoc advisor, 2.5 years known):
Professor, School of Sustainability, College of Global Futures, Arizona State University, AZ, USA
Tel: +1 (480)965-8712, Email: m.anderies@asu.edu