Curriculum Vitae

Arman Ahmadi

Ph.D. Candidate & Research Assistant, Department of Biological and Agricultural Engineering, University of California, Davis

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1. Education

- **Ph.D. (2020-2025)**
  Biological Systems Engineering (GPA = 4)
  University of California, Davis, CA, US
- **Master of Science (2016-2019)**
  Civil Engineering-Water Quality Management (GPA = 4)
  University of Tehran, Iran
  Thesis Title: "Water and Wastewater Resources Management in Urban Areas with an Emphasis on Social Network Analysis"
- **Bachelor of Science (2011-2015)**
  Civil Engineering
  University of Tehran, Iran

2. Professional Experience

- **Graduate Teaching Assistantship**
  - University of California, Davis
    - Engineering Economics (Winter 2022)
    - Engineering Economics (Winter 2021)
    - Unmanned Aerial Systems (Fall 2021)
  - University of Tehran
    - Hydraulic Structures (Spring 2019, Fall 2018, Spring 2017, Fall 2016)
    - Principles of Contaminant Transport and Diffusion Modeling (Fall 2018)
    - Uncertainty, Risk, and Reliability (Fall 2018)
- **Graduate Research Assistantship**
  - University of California, Davis
    - Advanced Irrigation Lab (Fall 2020-present)

3. Honors and Awards

- 2022-23 Summer Graduate Student Researcher Award (2022)
  - University of California, Davis
- Walter Rosenburg Research Fund (2020)
  - Biological Systems Engineering Graduate Program, University of California, Davis
- Fellowship Award (2020)
  - University of California, Davis

- Excellent Students Scholarship (2018)
    - University of Tehran Supporters Foundation

4. Research Interests

- Hydrology and Water Resources
    - Water resources planning and management, Hydrological modeling, Agricultural Water Resources and Irrigation
- Precision Agriculture
    - Agricultural Instrumentation, Biometeorology, Proximal and Remote Sensing
- Soil-Plant-Water Relations
    - Evapotranspiration
- Data Science
    - Statistics, Data Analysis, Machine learning, Deep Learning, Data-driven modeling

5. Reviewer of International Journals

- Science of The Total Environment (Elsevier)
- Computers and Electronics in Agriculture (Elsevier)
- Sustainable Cities and Society (Elsevier)
- Journal of The ASABE (ASABE)
- Environmental Science and Policy (Elsevier)
- Natural Hazards (Springer)
- Groundwater for Sustainable Development (Elsevier)
- Water Supply (IWA)
- Frontiers in Water (Frontiers)

6. Puplications

Journal Publications:

1) Emami, M., **Ahmadi, A.**, Daccache, A., Nazif, S., Mousavi, S.F. and Karami, H., 2022. County-Level Irrigation Water Demand Estimation Using Machine Learning: Case Study of California. *Water*, *14*(12), p.1937. DOI: https://doi.org/10.3390/w14121937 (Q1, SJR: 0.72, IF: 3.103)
2) Azadgoleh, M.A., Mohammadi, M.M., Ghodrati, A., Sharifi, S.S., Palizban, S.M.M., **Ahmadi, A.**, Vahidi, E. and Ayar, P., 2022. Characterization of contaminant leaching from asphalt pavements: A critical review of measurement methods, reclaimed asphalt pavement, porous asphalt, and waste-modified asphalt mixtures. *Water Research*, p.118584. DOI: https://doi.org/10.1016/j.watres.2022.118584 (Q1, SJR: 2.81, IF: 11.236)
3) **Ahmadi, A.**, Olyaei, M., Heydari, Z., Emami, M., Zeynolabedin, A., Ghomlaghi, A., Daccache, A., Fogg, G.E. and Sadegh, M., **(2022)**. Groundwater Level Modeling with Machine Learning: A Systematic Review and Meta-Analysis. *Water*, *14*(6), p.949. DOI: https://doi.org/10.3390/w14060949 (Q1, SJR: 0.72, IF: 3.103)

4) Mokhtari, A., **Ahmadi, A.**, Daccache, A., Drechsler, K. **(2021)**. Actual Evapotranspiration from UAV Images: A Multi-Sensor Data Fusion Approach. *Remote Sensing*, *13*, 2315. DOI: https://doi.org/10.3390/rs13122315 (Q1, SJR: 1.29, IF: 4.848)
5) **Ahmadi, A.**, Emami, M., Daccache, A., & He, L. **(2021)**. Soil Properties Prediction for Precision Agriculture Using Visible and Near-Infrared Spectroscopy: A Systematic Review and Meta-Analysis. *Agronomy*, *11*(3), 433. DOI: https://doi.org/10.3390/agronomy11030433 (Q1, SJR: 0.71, IF: 3.417)
6) **Ahmadi, A.**, Kerachian, R., Skardi, M. J. E., & Abdolhay, A. **(2020)**. A stakeholder-based decision support system to manage water resources. *Journal of Hydrology*, *589*, 125138. DOI: https://doi.org/10.1016/j.jhydrol.2020.125138 (Q1, SJR: 1.68, IF: 5.722)
7) **Ahmadi, A.**, & Nasseri, M. **(2020)**. Do direct and inverse uncertainty assessment methods present the same results?. *Journal of Hydroinformatics*, *22*(4), 842-855. DOI: https://doi.org/10.2166/hydro.2020.190 (Q2, SJR: 0.65, IF: 2.376)
8) **Ahmadi, A.**, Kerachian, R., Rahimi, R., & Skardi, M. J. E. **(2019)**. Comparing and combining Social Network Analysis and Stakeholder Analysis for natural resource governance. *Environmental Development*, *32*, 100451. DOI: https://doi.org/10.1016/j.envdev.2019.07.001 (Q1, SJR: 0.79, IF: 3.326)
9) **Ahmadi, A.**, Nasseri, M., & Solomatine, D. P. **(2019)**. Parametric uncertainty assessment of hydrological models: coupling UNEEC-P and a fuzzy general regression neural network. *Hydrological Sciences Journal*, *64*(9), 1080-1094. DOI: https://doi.org/10.1080/02626667.2019.1610565 (Q1, SJR: 0.95, IF: 3.787)

Local Journal Publications:

1) Nasseri, M., & **Ahmadi, A. (2019)**. Simulation of Parametric Uncertainty of Hydrological Models Using UNEEC-P Framework: Monthly Water Balance Model Case Study. *Iran-Water Resources Research.* (In Persian)

Conference Proceedings:

1) Sarang, A., Parsa, S., **Ahmadi, A.**, and Azarnivand, A.R. **(2018)**. Analysis of the relationship between EC and TDS and their changes in the Karaj River. *11th International Congress on Civil Engineering.*
2) Nasseri, M., & **Ahmadi, A. (2018)**. Presenting a Novel Approach for Holistic Uncertainty Assessment using UNEEC-P Method: Monthly Water Balance Model Case Study. *7th National Conference of Iran Water Resources Management.* (In Persian)

7. Membership in Professional Societies

- American Society of Agricultural and Biological Engineers (ASABE)

8. Skills and Experience

- **Computer Programming:** Python, MATLAB, Fortran, Visual Basic
- **Statistics and Data Science:** Experiment Design, Data Analysis, Data Visualization, Machine Learning, Artificial Neural Network, Data Assimilation, SAS
- **Modeling, Optimization, and Simulation:** Genetic Algorithm, MOPSO, Fuzzy Mathematics and Regression, Uncertainty Assessment, Agent-Based Modeling, Finite Difference Method, Finite Element Method, Heat and Mass Transfer Modeling, COMSOL
- **GIS and Remote Sensing:** Environmental Remote Sensing, ENVI, ArcGIS, Google Earth Engine, UAV pilot, Agisoft PhotoScan

- **Social Analyses:** Survey and Questionnaire Designing, Stakeholder Analysis, Social Network Analysis, Institutional Analysis, Social Learning, UCINET, NETDRAW
- **Environmental Modeling:** Water Balance, Hydrological Modeling, Water Quality Modeling, Contaminant Transport and Diffusion Modeling, Runoff Forecasting
- **Atmospheric science:** Bio- and Micro- meteorological instrumentation, Design and Install Weather Stations, LoggerNet

9. Professional Profile

- **Personal Resume Website:** http://arman-ahmadi.com/
- **Google Scholar:** https://scholar.google.com/citations?user=oRpYGmIAAAAJ&hl=en&oi=ao
- **ResearchGate:** https://www.researchgate.net/profile/Arman-Ahmadi
- **LinkedIn:** https://www.linkedin.com/in/arman-ahmadi-85724989/
- **Advanced Irrigation Lab:** https://advancedirrigation.ucdavis.edu/people/arman-ahmadi