

# Curriculum Vitae

## Arman Ahmadi

Ph.D. Student & Teaching Assistant, Department of Biological and Agricultural Engineering, University of California, Davis

(Last Updated: January 4, 2022)

### 1. Education

---

- **Ph.D. (2020-2025)**  
Biological Systems Engineering (GPA = 4)  
University of California, Davis, CA, US
- **Master of Science (2016-2019)**  
Civil and Environmental Engineering (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 and Environmental Engineering  
University of Tehran, Iran

### 2. Professional Experience

---

- **Graduate Teaching Assistantship**
  - University of California, Davis
    - Engineering Economics (Winter 2021)
    - Unmanned Aerial Systems (Fall 2021)
    - Engineering Economics (Winter 2022)
  - University of Tehran
    - Hydraulic Structures (Fall 2016, Spring 2017, Fall 2018, Spring 2019)
    - 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

---

- Excellent Students Scholarship (2018)
  - University of Tehran Supporters Foundation
- Fellowship Award (2020)
  - University of California, Davis
- Walter Rosenberg Research Fund (2020)
  - Biological Systems Engineering Graduate Program, University of California, Davis

#### 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

---

- Sustainable Cities and Society (Elsevier)
- Water Supply (IWA)
- Environmental Science and Policy (Elsevier)
- Science of The Total Environment (Elsevier)
- Frontiers in Water (Review Editor)

#### 6. Publications

---

##### Journal Publications:

- 1) 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)
- 2) **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)
- 3) **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)
- 4) **Ahmadi, A.**, & Nasserli, 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)
- 5) **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)
- 6) **Ahmadi, A.**, Nasserli, 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) Nasser, 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) Nasser, 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>