

ADELL MORADI SABZKOUHI

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PERSONAL INFORMATION

Position: Faculty Member

Office: Dept. of Hydraulic Eng., Faculty of Agriculture Eng. and Rural Development., Agricultural Sciences and Natural Resources University of Khuzestan (ASNRUKH)., Mollasani, Khuzestan Prov., Iran.
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EMPLOYMENT RECORDS

- 2018 - present: Faculty Member, Department of Hydraulic Eng., Agricultural Sciences and Natural Resources University of Khuzestan, Mollasani, Khuzestan Prov., Iran.
- 2017 to 2021: Supervisor (Part-time), PARSABAZMA Consulting Engineering and Research Company, Ahvaz, Iran.
- 2016-2017: R&D Officer (Part-time), ASEMAN BORJ KAROON Consulting Engineers, Ahvaz, Iran
- 2007 – 2013: Lecturer, Department of Hydraulic Eng., Agricultural Sciences and Natural Resources University of Khuzestan, Mollasani, Khuzestan Prov., Iran.
- 2003 - 2007: Design Hydraulic Engineer (Part-time), Urban Water System Projects, POURAB Consultant Engineers, Ahvaz, Iran.

EDUCATION BACKGROUND

Ph.D., in *Civil Eng.-Hydraulics*, Dept. of Civil Eng., Faculty of Eng., Shahid Chamran University (SCU), Ahvaz, Iran. 2013-2018

Thesis Title: *Development of Mathematical Modeling for Fuzzy Analysis-Design of Pipe Networks under Uncertainty*, Supervisor: Prof. Ali Haghighi

M.Sc. in *Irrigation Structures*, 2006, Faculty of Water Sciences Engineering, Shahid Chamran University (SCU), Ahvaz, Iran,

Thesis Title: Investigation of the Effects of Drop Structure Geometry and Hydraulic Characteristics on Energy Dissipation Using Physical Modeling, Supervisor: Prof. Mahmood Kashefipour and Dr. Mahmood Bina

B.Sc. in *Irrigation Engineering*, 2003, Department of Irrigation Engineering, Shahid Chamran University (SCU), Ahvaz, Iran

RESEARCH INTERESTS

SELECTED PUBLICATION

- Sabzkouhi, A. M.**, Lee, J., and Keck, J., (2022), “*Energy and Water Quality Management in Water Distribution Networks Considering Variable Speed Pump and Tank Flush Scheduling*”, World Environmental & Water Resources Congress, EWRI, ASCE, Atlanta, GA (Accepted)
- Sabzkouhi, A. M.**, Lee, J., and Keck, J., (2021), “*Energy Cost and Water Age Management in Water Distribution Networks via Constant Speed Optimal Pump Scheduling*”, Proceedings of the 1st National Conference on Water Quality Management & 3rd National Conference on Water Consumption Management - Loss Reduction and Reuse, Tehran University (in Persian)
- Amirsardari, A.R., **Sabzkouhi, A.M.**, Zahiri, J. and Derakhshannia R., (2021), “*Improving the Performance of Water Supply Pump Stations in Terms of Energy Consumption: A Comparison Between the Constant and Variable-speed Optimal Pump Scheduling*”, Proceedings of the 2nd National Conference on Agricultural Research and Environment, ASNRUKH, Mollasani (in Persian)
- Minaei, A., **Sabzkouhi, A.M.**, Haghghi, A. and Creaco, E., (2020) “*Developments in Multi-Objective Dynamic Optimization Algorithm for Design of Water Distribution Mains*” *Journal of Water Resources Management*, Springer, 34(9), 2699–2716. <https://doi.org/10.1007/s11269-020-02559-8>
- Zahiri, J. and **Sabzkouhi, A.M.**, (2020) “*Uncertainty and Accuracy Analysis of Longitudinal Dispersion Coefficient Estimation Methods in Rivers*” *Journal of Water and Soil*, 34(4): 813-825. (in Persian) DOI: 10.22067/JSW.V34I4.85364
- Shirjandi, Sh., Khademalrasoul, A., **Sabzkouhi, A.M.**, Amerikhah, H., (2020), “*Optimal Placement of Gabions Using AHP and NSGA-II Algorithm (Case Study: Emamzadeh Watershed)*” *Agricultural Engineering.*, 43(3): 315-330 (in Persian), DOI:10.22055/AGEN.2020.31651.1522
- Ahmadian, S., **Sabzkouhi, A. M.**, Haghghi, A., and Ranginkaman, M.H., (2019) “*Smart Pressure Management in Urban Water Distribution Networks for Firefighting*”, *Journal of Hydraulic Structures*, SCU Publication, 5(2):71-89. DOI: 10.22055/jhs.2019.30646.1119
- Sabzkouhi, A. M.**, and Haghghi, A., (2019) “*Analysis of Hydraulic Stress Effects on the Performance of Water Distribution Networks Using Interval Analysis and Optimization Approach*”, *Iranian Journal of Water and Wastewater*, 30(3): 1-16. (In Persian), DOI:10.22093/wwj.2018.97826.2487.
- Sabzkouhi, A. M.**, and Haghghi, A., (2018) “*Uncertainty Analysis of Transient Flow in Water Distribution Networks*”, *Journal of Water Resources Management*, Springer, 32(9):1-18. DOI: 10.1007/s11269-018-2023-4
- Sabzkouhi, A. M.**, and Haghghi, A. (2018). “*Closure to Uncertainty Analysis of Pipe-Network Hydraulics Using a Many-Objective Particle Swarm Optimization.*”, *Journal of Hydraulic Engineering*, 144(4). 07018002. DOI: 10.1061/(ASCE)HY.1943-7900.0001148
- Sabzkouhi, A. M.**, Haghghi, A., and Minaie, A., (2017), “*Investigation of Uncertainty Effects on Hydraulic Performance of Water Distribution Networks Using the Fuzzy Sets Theory*”, Proceedings of the 37th IAHR World Congress, Kuala Lumpur, Malaysia, 5276-5283
- Sabzkouhi, A.M.** and Haghghi, A., (2016), “*Uncertainty Analysis of Pipe-Network Hydraulics Using a Many-Objective Particle Swarm Optimization.*” *J. Hydraul. Eng., ASCE*, [10.1061/\(ASCE\)HY.1943-7900.0001148](https://doi.org/10.1061/(ASCE)HY.1943-7900.0001148) , 04016030.

- Minaie, A., Haghghi, A., Ghafouri, H. and **Sabzkouhi, A.M.**, (2016), “*Optimal Design of Water Distribution System Based on Urban Areas Expansion Using a Self-adaptive Multi-objective NSGA-II*”, 3rd Iranian National Conference on Applied Research in Civil Engineering, Architecture and Urban Management - in Persian
- Sabzkouhi, A.M.**, Kashefipour, M. and Salimi Ch., Atena, (2014), “*A Field Study on Peak Demand Factor of Rural Water Distribution Networks (North-Eastern Part of Khuzestan Province, Iran)*”, Iranian Journal of Water and Wastewater, Vol. 89, pp: 44-52 - in Persian
- Sabzkouhi, A.M.**, Kashefipour, M., and Bina, M., (2011), “*Investigation of Effective Parameters on Stepped and Straight Drops Energy Dissipation Using Physical Modeling*”, International Journal of Food, Agriculture and Environment, WFL. Publisher, Vol.9 (3and4), pp: 748-753
- Sabzkouhi, A.M.**, Kashefipour, M., and Bina, M., (2011), “*Experimental Comparison of Energy Dissipation on Drop Structures*”, Iranian Journal of Science and Technology of Agriculture and Natural Resources, Water and Soil Science, Isfahan University of Technology, Iran, Vol. 15(56), pp: 209-221 -in Persian
- Yarahmadi, F., Landi, A., Asudar, M.A. and **Sabzkouhi, A.M.**, (2013), “*Effects of Tillage Methods and Irrigation on Greenhouse Gasses Emission under Wheat Cultivation in the North of Khuzestan*”, Iranian Journal of Agricultural Engineering, Vol. 35(2), pp: 71-82 -in Persian

RESEARCH PROJECTS

- *Management of energy consumption in water supply variable-speed pumping stations using pressure control for critical hotspots*, 2020, Moradi Sabzkouhi, A., Zahiri, J. and Derakhshannia, R., Funded by ASNRUKH
- *Fuzzy Uncertainty Analysis of Longitudinal Dispersion Coefficient in Rivers*, 2020, Zahiri, J. and Moradi Sabzkouhi, A., ASNRUKH, Funded by ASNRUKH
- *Technical-Economic Feasibility Study on Resolving Zanjan’s Water Shortage from Shahriar Dam vs. Moshampa Dam; Challenges and Solutions*, 2019, Haghghi, A., M.V. Samani, H., Moradi Sabzkouhi, A., Adibian, M. and Ayati, A., SCU, Funded by IRAN Water Resources Management Company; 95/ع/ک/168;
- *Interruption causes in water distribution networks and introducing control methods to improve operational efficiency*, 2014, Haghghi, A. and Moradi Sabzkouhi, A., SCU, Funded by Rural Water and Wastewater Company of Khuzestan; Contract No: ش/ق-3342;
- *Effects of Temperature on Chlorine Kinetic Decay Factors in Rural Water Distribution Networks in Khuzestan Province*, 2013, Moradi Sabzkouhi, A. and Eskandari-Macvand, M.T., ASNRUKH, Funded by Rural Water and Wastewater Company of Khuzestan; National Code: 1390/142/م/ن ی; Contract No: 3020/212D-900;1
- *Investigation of Demand Pattern and Determination Hourly and Daily Peak Factors of Rural Water Distribution Networks in Khuzestan Province*, 2011, Moradi Sabzkouhi, A., Kashefipour, M. and Salimi Chamkakaie, A., ASNRUKH, Funded by Rural Water and Wastewater Company of Khuzestan; National Code: 1387/142315 م/ن ی; Contract No: 2162/212R-87002

HONORS & AWARDS

- 2020 ASCE Outstanding Reviewer for the Journal of Water Resources Planning and Management.
- 2012: Fully funded scholarship awarded by the Iranian Ministry of Science, Research, and Technology for Ph.D. in Civil Eng., Hydraulics
- 2003: Rank 6th of 355 Candidates in the National Entrance Examination Leading to Admission in M.Sc. in Agricultural Engineering - Irrigation Structures, National Organization of Educational Testing, Ministry of Science, Research and Technology, Iran Government.
- 2003: Rank 1st among 29 Undergraduate Students of Agricultural Engineering-Irrigation at Shahid Chamran University, Ahvaz, Iran

COURSES TAUGHT

- Fluid Mechanics
- General Hydraulics
- Pump and Pumping Stations
- Statics
- Design of Water Supply Pipe Networks
- Water Resources Engineering

PROFESSIONAL AFFILIATION

- Affiliate Member of the American Society of Civil Engineers (ASCE)
- Member of Iran Water and Wastewater Association (IWWA)

PROFESSIONAL SERVICES

- Reviewer, The 2022 World Environmental & Water Resources Congress, EWRI, ASCE
- AWWA Water Science Journal
- Reviewer, ASCE Journal of Water Resources Planning and Management
- Reviewer, Journal of Water Resources Management, Springer
- Reviewer, Journal of Hydraulic Structures

REFEREES

- Juneseok Lee, Associate Professor, Department of Civil and Environmental Engineering, Manhattan College, NY, juneseok.lee@manhattan.edu
- Ali Haghghi, Professor, Department of Civil Engineering, Shahid Chamran University, Ahvaz, Iran, a.haghghi@scu.ac.ir ; ali77h@gmail.com
- Hossein Mohammad Vali Samani, Professor Emeritus, Dept. of Civil Engineering, Shahid Chamran University, Ahvaz, Iran, hossein.samani@gmail.com
- Mahmood Kashefipour, Professor, Faculty of Water Sciences Engineering, Shahid Chamran University, Ahvaz, Iran, kashefipour@scu.ac.ir ; Kashefipour@Excite.Com
- Mahmood Shafaie Bajestan, Professor, Faculty of Water Sciences Engineering, Shahid Chamran University, Ahvaz, Iran, m-shafaeibejestan@scu.ac.ir, m_shafai@yahoo.com