



Curriculum Vitae

Jafar Jafari-Asl

**Ph.D. Candidate, Department of Civil Engineering, College of Engineering,
University of Sistan and Baluchestan, Zahedan, IRAN.**

1. PERSONAL INFORMATION

Date of Birth: June 16, 1991

Place of Birth: Zanjan, Iran

Nationality: Iranian

E-mail: Jafar.Jafariasl@pgs.usb.ac.ir
Jafar.Jafariasl@yahoo.com

Mailing Address: Department of Civil Engineering, College of Engineering, University of Sistan and Baluchestan, Zahedan, IRAN, Postal Code: 98155-987, Tel.: +98-919-344-1370.

2. EDUCATION

- 1) **Master of Science:** Civil Engineering- Water Recourses Management and Engineering, September 11, 2016, Yasouj University, Yasouj, Iran (GPA: 16.68).
 - Title of Master of Science Thesis: “Optimal Pressure Control for Leakage Minimization in Water Distribution Systems Management Using Meta Heuristic Techniques” (Supervisor: Dr. Hossein Montaseri).
- 2) **Bachelor of Science,** Civil Engineering, September 22 ,2013, Roozbeh Institute of Higher Education, Zanjan, Iran, Iran (GPA: 14.41).
- 3) **Associate of Science,** Building Science, June 26, 2011, Yazdanpanah University of Sanandaj, Sanandaj, Iran.

3. RESEARCH INTERESTS

- Water Distribution Systems (Pressure, leakage and energy management)
- Application of Optimization methods in Water and Environmental Resources Management
- Reliability- based optimization design (Monte Carlo Simulation Methods, Subset Simulation, Importance Sampling, Metamodels, FORM, ...).
- Application of Remote Sensing (RS) and GIS in Water Resources Management

4. HONORS

- 24th position in Iranian National Exam for Ph.D. Degree Between 506 people in Civil engineering- Water Resources Management and Engineering (2017).
- 4th position in among 9 classmates in master course.

5. TEACHING RECORDS

Undergraduate courses:

- 1) Hydraulics Lab
- 2) Soil Mechanics
- 3) Mechanics Of Materials
- 4) Welding Metal Workshop
- 5) Surveying engineering
- 6) Technical English in Surveying engineering
- 7) Principles of Geographic Information System
- 8) Geometric design of the road

Graduate courses:

- 1) Architectural Law
- 2) Advanced Hydraulics (Courses Taught)

6. HONORS

- 24th position in Iranian National Exam for Ph.D. Degree Between 506 people in Civil engineering- Water Resources Management and Engineering (2017).
- 4th position in among 9 classmates in master course.

7. PUBLICATIONS

Journal Publications

- 1) **Jafari-Asl, J.**, Sami Kashkooli B., Bahrami M. “Optimal Pressure Control for Leakage Minimization in Water Distribution Systems Using Imperialist Competitive Algorithm”. Journal of Water Science Engineering, Volume 5, Issue 12, Autumn 2015, Page 69-82(In Persian).
- 2) **Jafari-Asl, J.**, Sami Kashkooli B., Bahrami M. “Optimal Pressure Control for Leakage Minimization in Water Distribution Networks”. Journal of Water and Sustainable Development , Volume 2, Issue 4, Autumn 2017, Page 49-56 (In Persian).
- 3) **Jafari-Asl, J.**, Malekmahmoudi M., Sami Kashkooli B., Montaseri H., Bahrami M. “Optimal Pressure Control for Leakage Minimization in Water Distribution Systems Using Imperialist Competitive Algorithm”. Iranian Journal of Irrigation and Water Engineering, Jan 2019, Accepted, (In Persian).
- 4) **Jafari-Asl, J.**, Azizyan Gh, Hashemi Monfared., A., Rashki M. “Multi-objective optimal operation of serial pump stations in water conveyance systems(Case study: Shiraz water

conveyance system from Drodzan Dam) ”. Iranian Journal of Irrigation and Water Engineering, Jan 2020, Accepted, (In Persian).

- 5) Hosseini, A., Givehchi, M., **Jafari-Asl, J.**, “Geometric Optimization of Labyrinth Spillways and Improvement of Hydraulic Performance Using Gray Wolf Algorithm”, Iranian Journal of Irrigation and Drainage No. 6, Vol. 13, Feb.-Mar. 2020, p. 1589-1600 (In Persian).

A few number of Conference Proceedings

- 1) Ohadi, S., Mohtashami, A., **Jafari-Asl, J.**, “Numerical modeling of water hammer in pipe connected to reservoir using the method of characteristics”, the 17th Iranian Hydraulic Conference, Shahrekord University, Shahrekord, Iran, Sept 4-6, 2018 (In Persian).
- 2) **Jafari-Asl, J.** Mohtashami, A., Ohadi, S., “Water loss management in water distribution system”, the 7th Iranian Water Resources Management Conference, Yazd University, Yaz, Iran, Nov 4-6, 2018 (In Persian).
- 3) Ohadi, S., **Jafari-Asl, J.**, Mohtashami, A., “Parameter estimation of linear Muskingum models using meta- heuristic methods”, the 12th International Civil Engineering Congress, University of Tehran, Tehran, Iran, May 8-10, 2018 (In Persian).

8. Book

-
- 1) **Jafari-Asl, J.** and Ohadi, S. (2019). Complete descriptions of Iranian National Exam of Ph.D in Civil engineering- Water and Hydraulic Structure (In Persian). ISBN 9786001684166, Noavar publication, Tehran, Iran.
 - 2) **Jafari-asl, J.** (2015) Engineering Hydrology Problem Analysis (In Persian), ISBN 9786000433260, Zanjan.
 - 3) Malekmahmoudi M. and **Jafari-asl, J.** (2015) Technical Dictionary of Water resources management (in Persian), ISBN 9786007474693, Zanjan.
 - 4) **Jafari-asl, J.** and Sadeghi R. (2015) Hydraulics and Fluid Mechanics Laboratory (In Persian), ISBN 9786007474839, Zanjan.

9. M.Sc. Theses (Advisor)

-
- 1) Atefeh Sadat Hosseini “Multi-objective optimization of trapezoidal weir using gray wolf optimizer”, M.Sc. of Department of Civil Engineering, University of Sistan and Baluchestan, (2017-2019).
 - 2) Mokhtar Bekrnejad “calibration of water distribution system using meta heuristic methods(case study: water distribution system of Zahedan) ” , M.Sc. of Department of Civil Engineering, University of Sistan and Baluchestan, (2017-present).
 - 3) Karim Ghofrani “Optimal pressure control for leakage minimization in water distribution systems by location and setting of pressure valve reduce (Case Study: Water Distribution System of Zahedan)”, M.Sc. of Department of Civil Engineering, University of Sistan and Baluchestan, (2017-present).
 - 4) Vahid Piri “Pressure smart management in water distribution systems for firefighting (Case Study: water distribution system of zahedan)”, M.Sc. of Department of Civil Engineering, University of Sistan and Baluchestan, (2017-present).
 - 5) Mohammad Yousefi “Multi-objective Optimization of Pressurized irrigation Distribution Networks using MOALO Algorithm”, M.Sc. of Department of Civil Engineering, University of Sistan and Baluchestan, (2017-present).

-
- 6) Sajad Hashemi “Pressure management in water distribution in order leakage controlling using pressure reducing valves (PRVs) (Case Study: Rural water distribution system of Nehbandan city”, M.Sc. of Department of Civil Engineering, University of Sistan and Baluchestan, (2019-present).
 - 7) Mozghan Shahraki “Predicted of Pipe Failure Rate of Water Distribution Systems using Artificial Neural Network and Meta-heuristic Methods”, M.Sc. of Department of Civil Engineering, University of Sistan and Baluchestan, (2019-present).
 - 8) Amrollah Elahinia “Quality management of water distribution systems by optimizing dosage and location of chlorine injection using meta-heuristic techniques”, M.Sc. of Department of Civil Engineering, University of Sistan and Baluchestan, (2017-present).
 - 9) Amin Sanadgol “Multi-Objective Optimization of Shape and Body of Embankment Dams for reducing Design Costs”, M.Sc. of Department of Civil Engineering, University of Sistan and Baluchestan, (2017-present).

10. Linguistic Skills

- 1) **Persian:** Native Language.
- 2) **English:** Competent in scientific writing and reading and capable in speaking and listening.

11. Software and Model Experiences

- 1) **Programming Software:** MATLAB, FORTRAN.
- 2) **Water Distribution Systems Simulation Software:** EPANET, WaterGems
- 3) **Climate change modeling:** LARS-WG
- 4) **GIS:** Geographic Information System Software
- 5) **Artificial Intelligent Models:** Artificial Neural Networks (ANNs: Including MLP, RBF, GRNN and PNN NNs), Support Vector Machines (SVMs including SVR and PSVM), M5P Decision Tree, Bayesian Networks (BN), K-Nearest Neighbor (KNN), Clustering.
- 6) **Optimization Model and Software:** Genetic Algorithm (GA and NSGA-II), Particle Swarm Optimization (PSO) and Honey Bee Mating Optimization (HBMO), LINGO Software, Optimization toolbox (Solver) of Excel for simple optimization problems.
- 7) **Water and Environmental Engineering Software:** MODFLOW, HEC-RAS, HEC-HMS, SWAT, SEEP-W.
- 8) **General Software:** Microsoft Office (Excel, Word and PowerPoint)