



Dr. Ali Mohtashami

Assistant Professor

Engineering Research Team...

UNESCO Chair on Aflaj Studies and Socio-hydrology

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Time at UoN: Since 2022

Marital Status: Married...

Ali Mohtashami is an Assistant Professor at the UNESCO Chair of Aflaj Studies and Socio-Hydrology (UCASAS), University of Nizwa. He received his MSc in Civil Engineering (Water Resources Management) from the University of Birjand in 2017.. He earned his PhD in Civil Engineering from the University of Sistan and Baluchestan, Iran, in 2021, during which he was recognized as the top student by the Faculty of Engineering. Dr. Mohtashami's research interests include hydrology, sustainable water resources management, groundwater modeling, meshless numerical methods, and data assimilation. He serves as a reviewer for more than 20 peer-reviewed journals in civil engineering, water resources, and agricultural sciences. He has authored and co-authored over 35 scientific journal articles, two books, and has contributed to five research projects.

Academic Qualifications

PhD of Civil Engineering , University of Sistan and Baluchestan, 2021

MSc, Civil Engineering, University of Birjand, 2017

BSc, University of Isfahan, 2014

Teaching Activities

Lecturer in Birjand University of Technology, Courses: Fluid Dynamics, Hydraulic of Open Channels, Water and Waste water Treatment,, 2021-2022

Lecturer in University of Birjand, Courses: Water Machines, 2022-2023

Lecturer at Bozorgmehr University of Qaenat, Courses: Environmental Engineering, Fluid Dynamics, 2021-2022

Lecturer in Birjand University of Technology, Courses: Fluid Dynamics, Hydraulic of Open Channels, 2022-2023

Environmental Informatics, Fall 2023

Fundamentals of Air Pollution, Fall 2023

Energy and Environment, Spring 2024

Hydrology and Hydraulic, Spring 2024

Water Supply and Sewer Drainage Systems, Fall 2024

Aflaj Oman for Engineers, Spring 2025

Environmental Informatics, Spring 2025

Research Activities

- Research Interests

Groundwater

Numerical Method

Aflaj Knowledge

Quality Modeling

Modeling and Simulation

- Conference Presentations

Estimation groundwater balance with using meshless local Petrov-Galerkin, ``. 1st National Conference on Modelling and New Technologies in Water Management, 2018

- Conference Attendance

15th GCC Water Conference, Doha, Qatar, 28/04/2024

- Publications

Article:

1. 2025 [Application of the quality border delineation for sustainable protection of groundwater resources, qanats, against contamination using meshless numerical method](#)
2. 2025 [Qanats' assistance in reviving groundwater resources using numerical groundwater model](#)
3. 2025 [Engineering Thoughts Embedded in Ancient Groundwater Techniques: The Case of Falaj in Oman](#)
4. 2025 [Identification of the hydrological model of a runoff-sourced falaj using empirical methods](#)
5. 2024 [Simulation of sea water infiltration in coastal aquifer using MLPG numerical method](#)
6. 2024 [Quality Prediction of Sustainable Groundwater Resources, a Falaj in Oman](#)
7. 2024 [Computation of minimum adjustment factors for sustainable groundwater management using data assimilation and Vensim dynamic model](#)
8. 2024 [Hydraulic of sustainable groundwater resources, aflaj in Oman, using meshless numerical method](#)
9. 2023 [Presentation of a new decision-making plan for prioritizing the rehabilitation of sustainable groundwater resources \(case study: 9 aflaj of Oman\)](#)
10. 2023 [Data assimilation application in prediction of flowrate for a sustainable groundwater resource: Falaj Al-Khatmain, Oman](#)
11. 2023 [Models Are Essential for Water Resource Management](#)
12. 2023 [Inverse modeling application for aquifer parameters estimation using a precise simulation-optimization model](#)
13. 2023 [Qanat`s hydraulic harim determination by the usage of meshless numerical method](#)
14. 2022 [Numerical simulation of groundwater in an unconfined aquifer with a novel hybrid model \(case study: Birjand Aquifer, Iran\)](#)
15. 2022 [Numerical and Experimental Assessment of Suspended Material Effects on Water Loss Reduction from Irrigation Channels](#)
16. 2022 [Determination the optimal dimensions of concrete gravity dam by using metaheuristic algorithms \(Comparison of algorithms\)](#)
17. 2022 [Application of random walk algorithm into finite element numerical groundwater](#)

[model for capture zone depiction](#)

18. 2022 [Monitoring Network Design with MLPG-TLBO Hybrid Model \(Case study Birjand, Iran\)](#)
19. 2022 [Application of Meshless local Petrov-Galerkin approach for steady state groundwater flow modeling](#)
20. 2022 [Numerical Investigation the effect of Groundwater Uplift on the Interface Between Fresh and Saline Water and Mixing Zone in the Aquifers Adjacent Deserts](#)
21. 2021 [Determination of Well`s Capture Zones Using Random Walk Algorithm and FeFlow Simulation Model](#)
22. 2021 [Leakage Detection in Water Distribution Networks by the Use of Analytical and Experimental Models](#)
23. 2021 [Estimation of Parameters in Groundwater Modeling by Particle Filter linked to the meshless local Petrov-Galerkin Numerical Method](#)
24. 2020 [Determination of the optimal location of wells in aquifers with an accurate simulation-optimization model based on the meshless local Petrov-Galerkin](#)
25. 2020 [Usage of Particle Filter for Exact Estimation of Constant Head Boundaries in Unconfined Aquifer](#)
26. 2019 [Numerical Simulation of Groundwater Recharge by Injection Wells with Using Meshless Local Petrov-Galerkin](#)
27. 2019 [Experimental and numerical investigation of the effects of muddy water on seepage reduction in earthen channels and dry zone of qanat](#)
28. 2019 [Determination of the capture zone of wells by using meshless local Petrov-Galerkin numerical model in confined aquifer in unsteady state \(Case study: Birjand Aquifer\)](#)
29. 2019 [Computation of Groundwater Balance Using Numerical MLPG Method \(Case Study: Birjand Unconfined Aquifer\)](#)
30. 2019 [Prediction of Groundwater Fluctuations Using Meshless Local Petrov-Galerkin Numerical Method in a Field Aquifer \(Birjand Aquifer\)](#)
31. 2018 [Investigation the effects of muddy water in decreasing seepage in the transition channels \(Case study: Ferdows, South Khorasan province\)](#)
32. 2017 [Development of two dimensional groundwater simulation model using meshless method based on MLS approximation function in unconfined aquifer in transient state](#)

Book:

1. 2023 Novel Methods for Groundwater Management

2. 2020 Introduction to Groundwater Flow Modelling (Finite Element, Isogeometric and Meshless Methods)

Consultancy Activities

Research Expert, Regional Water Company, 2021- 2022

Membership in Professional Bodies

2022-Present: • Iranian Hydraulic Association

2021-Present: • Iranian Water Resources Management

2021-Present: • Iranian Rainwater Catchments Systems Association

2021-Present: • Iranian Water and Waste Water Association

Award and Recognitions

2022 Elite Graduate Student of Engineering Faculty in University of Sistan & Baluchestan

2020 Top Student of Engineering Faculty of Univesity of Sistan and Baluchestan

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