



Bahareh Pirzadeh Associate Professor

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Education

- ✓ B.Sc, Civil Engineering, Amirkabir University of Technology - 2004
- ✓ MS, Civil Engineering - Water Resource Management, K. N. Toosi University of Technology - 2008
- ✓ PhD, Civil Engineering - Water Resource Management, K. N. Toosi University of Technology - 2013
- ✓ PhD, Civil Engineering - Water Resource Management, K. N. Toosi University of Technology - 2013

Courses

1. turbulence modeling
2. Groundwater
3. hydraulic Machinery
4. hydroinformatics
5. Statistical Hydrology Project
6. Statistics and probability in engineering

Master Thesis

- 1. Investigation of water capacity of Zahedan emergency water supply plan from HormakTHamoon and Shileh area**
احسان عطائي كيا, [Bahareh Pirzadeh, Mehdi Azhdary Moghaddam, Amir Hossein Kazemian, Siroos Harif]
نيمسال دوم سال تحصيلي 1403-1402
- 2. Comparison of the Performance of Trapezoidal Piano Key Weir with Different Nose Shapes**
صبر الله امامي, [Bahareh Pirzadeh, Siroos Harif, Mehdi Azhdary Moghaddam, Hamed Farzaneh]
نيمسال دوم سال تحصيلي 1403-1402
- 3. Application of Rainfall Simulator to Investigate Rainfall-Runoff Relationship in A Laboratory-Scale**
سارا فرحيدفرد, [Bahareh Pirzadeh, Ali Salari, Mehdi Azhdary Moghaddam, Samad Fotoohi, Mahdi Shafiee Afarani]
نيمسال دوم سال تحصيلي 1401
- 4. Optimization of energy consumption in the pumping station with combined models of artificial intelligence**
محسن نوري, [Bahareh Pirzadeh,]
نيمسال اول سال تحصيلي 1402-1401
- 5. On the modeling the performance of wastewater treatments using the artificial intelligence and novel metaheuristic methods (Case study: Zahedan wastewater treatment)**
مجتبي بياضي نيا, [Gholamreza Azizyan, Bahareh Pirzadeh, Seyed Arman Hashemi Monfared, Mehdi Azhdary Moghaddam, Mohammad Hassan Mirabimoghaddam, Kiyanoosh Razzaghi]
نيمسال دوم سال تحصيلي 00-01
- 6. The effect of materials grading, the geometry and deposited of sediment in upstream gabion spillway on discharge coefficient the**
ساناز حسنيان شيروان, [Bahareh Pirzadeh, Seyed Hossein Rajaei, Mahmood Shafaei Bajestan, Siroos Harif, Mehdi Azhdary Moghaddam, , Mahdi Shafiee Afarani]
نيمسال دوم سال تحصيلي 00-01
- 7. Investigation of the effects of climate change on the environment and water needs of Marsh Crocodils (Mugger)**
سهيلا ساراني, [Bahareh Pirzadeh, Dddd Jhg]
نيمسال دوم سال تحصيلي 00-01
- 8. Redesign of transmission lines and water distribution network of west and East bampur complex**
مصطفي سياه سر, [Bahareh Pirzadeh, Abas ali Ghaderi, Mehdi Azhdary Moghaddam, Azadeh Agah]
نيمسال دوم سال تحصيلي 00-01
- 9. Application of machine learning for the prediction of rainfall in southern Sistan and Baluchestan**
محدثه بهالديني, [Bahareh Pirzadeh,]
نيمسال اول سال تحصيلي 00-01
- 10. Integrating water resources using system dynamics method (Case study: Sistan)**
نسنرن صبح روي, [Bahareh Pirzadeh, Ali Mohtashami]
نيمسال اول سال تحصيلي 00-01
- 11. On the resolution of hydraulic jump in exactly well-balanced numerical schemes: A new approach for shallow water models**

مجید اکبری, [Bahareh Pirzadeh]

نیمسال دوم سال تحصیلی 99-00

12. Reliability assessment and uncertainty analysis in contaminant transport modeling by meshless local Petrov-Galerkin method

سمیرا زین الدینی میمند, [Bahareh Pirzadeh, Seyed Arman Hashemi Monfared, Rasoul Memarzadeh, Siroos Harif, Mehdi Azhdary Moghaddam, , Seyyed Hossein Zohdi]

نیمسال دوم سال تحصیلی 99-00

13. Ways to deal with declining water quality of Chahnimeh and provide a suitable option to improve quality

میثم مختاری, [Bahareh Pirzadeh, Seyed Arman Hashemi Monfared, Mehdi Azhdary Moghaddam, Bahareh Bidar]

نیمسال دوم سال تحصیلی 99-00

14. Multi-Objective Optimization of Shape and Body of Embankment Dams for reducing Design Costs

امین سندگل, [Gholamreza Azizyan, Bahareh Pirzadeh, V V]

نیمسال اول سال تحصیلی 99-00

15. numerical study of hydrodynamic characteristics of density current in arch of open channel

الهه حمزه نژادبانگودی, [Gholamreza Azizyan, Bahareh Pirzadeh, F F]

نیمسال اول سال تحصیلی 98-99

16. Investigation of the Effect of Submergence Conditions on Scour Changes of Combined Series Dikes

سهیل رجب پور, [Bahareh Pirzadeh, Gholamreza Azizyan]

نیمسال اول سال تحصیلی 98-99

17. optimization of water resources systems by means of particle swarm optimization algorithm,differential evolution . application of evolutionary algorithms

میثم جعفری, [Bahareh Pirzadeh, Seyed Arman Hashemi Monfared, Hossein Mohammadi]

نیمسال اول سال تحصیلی 97-98

18. Simulation of the effect of bed roughness on secondary flows in the open channel

نرجس شاه بیگی, [Bahareh Pirzadeh]

نیمسال دوم سال تحصیلی 96-97

19. sdefEvaluation of water demands in sistan watershed considering the second water transport system and the demand of 46000 hectar agricultural lands and the assessment of dust stabilization demand.

نرگس دهمرده قلعه نو, [Seyed Arman Hashemi Monfared, Bahareh Pirzadeh, H H]

نیمسال اول سال تحصیلی 96-97

20. The Large Eddy Simulation (LES) technique for modeling turbulent flow on a roughness bed by OpenFOAM

ملیحه قویدل, [Bahareh Pirzadeh, F F]

نیمسال اول سال تحصیلی 96-97

Journals Papers

2026

1. Sensitivity analysis of the Stage-discharge parameters using the concept of isovel contours

Farid Jamifar, Bahareh Pirzadeh, Mahmoud F. Maghrebi

Volume: (20) 23 - 38

2. Future precipitation projections using CMIP6 multimodel ensemble: a deep learning-based bias correction approach

Mohammadreza Ettehad, Seyed Arman Hashemi Monfared, Bahareh Pirzadeh, Abbas Ali Rezapour, Gholamrez

Journal of Water and Climate Change Volume: (17) 1142 - 1160

3. GMDH-HS hybrid framework for optimization of combined drought indices in arid ecosystems

Narjes Shahbegi, Bahareh Pirzadeh, jamshid piri

ain shams engineering journal Volume: (17) 104268-1 - 104268-25

2025

4. Investigation of the impacts of climate change on the environment and water requirements of Marsh Crocodiles (*Crocodylus palustris*)

Soheila Sarani, Bahareh Pirzadeh, Yasin Zamani

Volume: (13) 53 - 70

5. Evaluation of the Combined Drought Index MCDI Based on Multivariate Copula Distribution

Narjes Shahbegi, Bahareh Pirzadeh, Jamshid Piri

Volume: (23) 105 - 132

6. Two-dimensional modeling of groundwater flow using a Meshless Local Petrov-Galerkin method based on RBF radial function (Case study: Rafsanjan plain)

Samira Zeinoddini, Bahareh Pirzadeh, Seyed Arman Hashemi Monfared, Rasoul Memarzadeh

Volume: (18) 911 - 925

7. Optimization of Energy Consumption in Pumping Station with the Combined Model of Gray Wolf Algorithm and Support Vector Regression

Mohsen Nouri, Bahareh Pirzadeh, Jamshid Piri

Volume: (20) 97 - 115

8. Evolution of drought characteristics using a new combined joint multivariate index based on the copula function

Narjes Shahbegi, Bahareh Pirzadeh, Jamshid Piri

NATURAL HAZARDS Volume: (121) 10059 - 10084

9. Multi-approaches Evaluation for Prediction of Discharge Coefficient of Porous Broad Crested Weirs Under Upstream Partial Blockage.

Sanaz Hoseinian shirvan, Bahareh Pirzadeh, Seyed Hosein Rajaei, Mahmood Shafai Bejestan

Iranian Journal of Science and Technology-Transactions of Civil Engineering Volume: (49) 4913 - 4925

10. Improving the Rating Curve Relationship in Rivers and Compound Channels Using Genetic Algorithm

Farid Jamifar, Bahareh Pirzadeh, mahmood faghfoor . m

Iranian Journal of Science and Technology-Transactions of Civil Engineering Volume: (49) 6113 - 6126

2024

11. Numerical solution of lock-exchange flow in a curved channel with an obstacle

Javad Mohammadi, Bahareh Pirzadeh, Gholamreza Azizyan, Azam Abdollahi

INTERNATIONAL JOURNAL OF MODERN PHYSICS C Volume: (35) 2540048-1 - 2540048-17

12. A second order well-balanced and entropy consistent numerical scheme for one-dimensional shallow water equations

Majid Akbari, Bahareh Pirzadeh

Volume: (19) 1 - 17

13. Disclosure of the intricacies in coupled groundwater flow and contaminant transport using mesh-less local Petrov-Galerkin method

Samira Zeinoddini, Bahareh Pirzadeh, Seyed Arman Hashemi Monfared, R. Memarzadeh

International Journal of Environmental Science and Technology Volume: (21) 8661 - 8674

2023

14. Physical Hydraulic Modeling of Gabion Stepped Weirs with Upstream Blockage

Sanaz Hoseinian shirvan, Bahareh Pirzadeh, Rajaei Seyed Hossein , mahmood Shafai Bejestan

Volume: (18) 87 - 99

15. Experimental investigation of gabion broad-crested weirs under upstream partial blockage conditions

Sanaz Hoseinian shirvan, Bahareh Pirzadeh, Seyed Hosein Rajaei, Mahmood Shafai Bejestan

Water Supply Volume: (23) 2638 - 2648

16. Preserving stationary discontinuities in two-layer shallow water equations with a novel well-balanced approach

Majid Akbari, Bahareh Pirzadeh

JOURNAL OF HYDROINFORMATICS Volume: (25) 1979 - 2003

2022

17. Determination the optimal dimensions of concrete gravity dam by using metaheuristic algorithms (Comparison of algorithms)

Bahareh Pirzadeh, JAFAR JAFARI-ASL, Ali Mohtashami, Sima Ohadi

Volume: (46) 203 - 222

18. Determining optimized depth of wells by considering climate change and water resources management (Case study: Khash watershed)

Ebrahim Zeraati, Samira Zeinoddini, Bahareh Pirzadeh, Seyed Arman Hashemi Monfared

Volume: (13) 160 - 174

19. Implementation of exactly well-balanced numerical schemes in the event of shockwaves: A 1D approach for the shallow water equations

Majid Akbari, Bahareh Pirzadeh

INTERNATIONAL JOURNAL FOR NUMERICAL METHODS IN FLUIDS Volume: (94) 849 - 895

20. Renovation and Upgrading of the Urban Water Distribution Systems by Multi-Objective Optimization Approach (Case Study: Part of Zahedan Distribution Network)

Peyman Arabi, Bahareh Pirzadeh, JAFAR JAFARI-ASL

Volume: (32) 1 - 16

2021

21. Reliability Analysis of Pumping Station for Sewage Network Using Hybrid Neural Networks - Genetic Algorithm and method of Moment

, Bahareh Pirzadeh, Behrooz Keshtegar, Mohammad Givchi

PROCESS SAFETY AND ENVIRONMENTAL PROTECTION Volume: (145) 39 - 51

22. Probabilistic Modeling and Estimation of Flow Rate of Sewage Treatment Plant Using Monte Carlo Hybrid Method

, Bahareh Pirzadeh, Behrooz Keshtegar, Mohammad Givchi

Volume: (31) 60 - 69

23. Determining Spatial and Temporal Variations of Groundwater Quality Parameters Using GIS and Interpolation Methods (Case Study: Sirjan Plain)

Bahareh Pirzadeh, Tahere Asvar

Volume: (11) 266 - 275

24. A hybrid statistical regression technical for prediction wastewater inflow

, Bahareh Pirzadeh, Behrooz Keshtegar, Mohammad Givchi

COMPUTERS AND ELECTRONICS IN AGRICULTURE Volume: (184) 106115-1 - 106115-17

[25. Reliability-based design and implementation of crow search algorithm for longitudinal dispersion coefficient estimation in rivers](#)

Alireza Ghaemi, Tahmineh Zhiyan, Bahareh Pirzadeh, Seyed Arman Hashemi Monfared, Amir Mosavi

ENVIRONMENTAL SCIENCE AND POLLUTION RESEARCH Volume: (28) 35971 - 35990

2020

[26. Hydrodynamic characteristics of lock-exchange flow in curve channels in the presence of blocks](#)

Elahe Hamzehnezhad bangodi, Gholamreza Azizyan, Bahareh Pirzadeh, a a

journal of hydrosiences and environment Volume: (8) 34 - 47

2019

[27. Simulation of the Effect of Cartridge Geometry on Membrane Separation Processes](#)

, Bahareh Pirzadeh, Davod Mohebbi Kalhori, Azam Abdollahi

Volume: (10) 30 - 40

2018

[28. Numerical investigation of UF membrane to reduce energy consumption using double porosity approach](#)

, Bahareh Pirzadeh, Davod Mohebbi Kalhori, Azam Abdollahi

WATER SCIENCE AND TECHNOLOGY Volume: (77) 2907 - 2916

[29. Numerical Analysis of Transmembrane Pressure Changes in UF Systems by Changing the Geometry of the Inner Surface of Hollow Fibers](#)

Bahareh Pirzadeh, Davod Mohebbi Kalhori, , Azam Abdollahi

Volume: (29) 51 - 60

2017

[30. Generating Artificial Water Quality Data for No-Trend Parameters in Reservoirs \(Chahnimeh No.1 in Sistan\)](#)

Bahareh Pirzadeh, , Seyed Arman Hashemi Monfared, Abas ali Ghaderi

Volume: (13) 226 - 232

[31. Water Quality Planning in Rivers Assimilative Capacity and Dilution Flow](#)

Seyed Arman Hashemi Monfared, , shane snyder, Gholamreza Azizyan, Bahareh Pirzadeh, Mehdi Azhdary Mo

BULLETIN OF ENVIRONMENTAL CONTAMINATION AND TOXICOLOGY Volume: (99) 531 - 541

2016

32. Water quality prediction in one-dimensional flow by means of new advective transport function and convergence criteria modification

Seyed Arman Hashemi Monfared, , Bahareh Pirzadeh, Mehdi Azhdary Moghaddam

Volume: (23) 147 - 162

2015

33. Analysis of roughness density and flow submergence effects on turbulence flow characteristics in open channels using a large eddy simulation

, Bahareh Pirzadeh

APPLIED MATHEMATICAL MODELLING Volume: (39) 1074 - 1086

2013

34. Numerical simulation of rough open channel using LES

, Bahareh Pirzadeh

Science Series Data Report Journal Volume: (5) 107 - 121

Conferences Papers

2017

1. pollutant removal Of fluid Using microfiltration

The Second National Conference On Sustainable Development in Energy Water and Environmental Engineering Systems

, Bahareh Pirzadeh, Davod Mohebbi Kalhori, Azam Abdollahi

2. Comparison of Standardized Precipitation Index and Reclamation Drought Index for Monitoring and Zoning of Meteorological Drought in Sistan

1st International Conference on Climate Change

Bahareh Pirzadeh,

3. Investigation of triangulat obstacle on muddy flow using Flow-3D

16th Iranian Hydraulic Conference

Sakineh Safari, Mohammad Givehchi, Bahareh Pirzadeh

4. Numerical investigation of the effect of bed roughness on shear stress and velocity profile in open channel flow

International Conference on Civil Engineering Architecture and Urban Development of contemporary of IRAN

Farid Jamifar, Bahareh Pirzadeh

2016

5. Bernoulli concept in engineering and its application in the real world

International conference in applied research in civil engineering , architecture

Bahareh Pirzadeh,

6. Developed Werner-Wengle wall layer models in simulation of backward facing step channel

The International Conference On Fluvial Hydraulics,River Flow 2016

, Bahareh Pirzadeh,

2015

7. Water Quality Management by Means of Assimilative Capacity Considering Allowable Concentration and Affected Distance

14th National Conference on HYDRAULIC

Seyed Arman Hashemi Monfared, , Bahareh Pirzadeh, Mehdi Azhdary Moghaddam