Mohanna Tajnesaie

• Contact Information

Address: Kurdistan, Bijar Province, Iran
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AAN-3543-2021

• Education

Ph.D., Civil Engineering, Hydraulic Structures   *September 2018*
    University of Semnan, Semnan, Iran
    Supervised by Dr. Khosrow Hosseini
    Advisor by   Dr. Ahmad Shakibaeinia
    Dissertation: Development of Moving Particle Semi-implicit model (MPS) using µ(I) rheology model for 3D simulation of dry and wet granular flow in landslides
    GPA=3.62/4
    Thesis=19.3/20 (evaluated as excellent)

M.Sc., Civil Engineering, Hydraulic Structures   *September 2010*
    University of Sistan & Baluchestan, Zahedan, Iran
    Supervised by Professor Mehdi Azhdary Moghadam
    Advisor by   Dr. Mohammad Givehchi
    Dissertation: Numerical Investigation of Secondary Current Cells, Velocity and Shear Stress Distribution in Trapezoidal Channels Flow
    GPA= 3.49/4 (top 10%)
    Thesis=18.75/20 (evaluated as excellent)

B.Sc., Civil Engineering   *October 2007*
    University of Tabriz University, Tabriz, Iran
    GPA= 3.26/4

• English Language Proficiency

Ministry of Science Research and Technology (MSRT)   Total: 57

• Publications

1. Mohanna Tajnesaie. (2023). Discussion of "An approach for prediction of flood hydrograph at outlet of an ungauged basin using modified dynamic wave model by Biswadeep Bharali and Utpal Kumar Misra., ISH Journal of Hydraulic Engineering, Volume 29, 2023 - Issue 1, 100-102.
2. Mohanna Tajnesaie, Ehsan Jafari Nodoushan. (2020). Modeling dam break on an erodible bed by the moving particle semiimplicit method with exponential Herschel-Bulkley rheology, Journal of Hydrosciences and Environment 4(8): 2020: 48-59.
3. Mohanna Tajnesaie, Ehsan Jafari Nodoushan, Reza Barati & Mehdi Azhdary Moghadam. (2020). Performance comparison of four turbulence models for modeling of secondary flow cells in simple trapezoidal channels, ISH Journal of Hydraulic Engineering, 26:2, 187-197

4. Mohanna Tajnesaie, Khosrow Hosseini, Ahmad Shakibaeinia. (2018). Meshfree particle numerical modelling of sub-aerial and submerged landslides, Computers & Fluids, Volume 172, 30 August 2018, Pages 109-121.

5. Mohanna Tajnesaie, Ehsan Jafari Nodoushan. (2020). 'Numerical modeling of parameters affecting the flow over the chute spillway aerator and the air concentration in downstream of it', *Journal of Hydraulics*, 15(4), pp. 47-63 (in Persian).

6. Mohanna Tajnesaie, Khossrow Hosseini, Ahmad Shakibaeinia. (2020). Numerical Modeling of water-waves induced by landslides with WC-MPS method, Journal of Dam and Hydroelectric Powerplant, 6 (23): 37-54 (in Persian).

7. Mohanna Tajnesaie, Ahmad Shakibaeinia, Khosrow Hoseini. (2018). Development of Mesh-free Numerical Model in the Simulation of Submerged Landslide Phenomen, Journal of Hydraulics, Volume 12, Issue 4 - Serial Number 124Winter 2018 Pages 27-41 (In Persian).

8. Khosrow Hosseini, Mohanna Tajnesaie, Ehsan Jafari Nodoushan. (2015). 'Optimization of the Geometry of Triangular Labyrinth Spillways, Using Fuzzy-Neural System and Differential Evolution Algorithm', Journal of Civil and Environmental Engineering, 45.1(78), pp. 81-91 (In Persian).

9. Mehdi Azhdary Moghadam, Mohanna Tajnesaie, Mohammad Givehchi. (2014). Application of Computational Fluid Dynamics for Modeling of Secondary Flow cells in Trapezoidal Channel Journal of Ferdowsi Civil Engineering. Volume 25, Issue 1 - Serial Number 1 Spring 2014 (In Persian).

10. Mohanna Tajnesaie, Mehdi Azhdary Moghadam. (2010). NUMERICAL MODELING OF SECONDARY CURRENT CELLS IN TRAPEZOIDAL CHANNELS WITH UNIFORM ROUGHNESS, JOURNAL OF MODELING IN ENGINEERING. Spring 2010, Volume 8, Number 20; Page(s) 57 to 70 (In Persian).

- Conference Proceedings

1. Mohanna Tajnesaie, Ehsan Jafari Nodoushan, "Modeling monthly rainfall with the help of artificial perceptron multilayer artificial neural network Case study; Stations in Kurdistan Province" 16th National Hydraulic Conference of Iran, 2017, Ardabil, Iran.

2. Ehsan Jafari Nodoushan, Mohanna Tajnesaie, Ahmad Shakibaeinia, "Lagrangian numerical modelling of local scour around circular pipe" 37th IAHR World Congressgust 13 – 18, 2017, Kuala Lumpur, Malaysia.

3. Ehsan Jafari Nodoushan, Mohanna Tajnesaie, Ahmad Shakibaeinia, Khosrow Hosseini, "Lagrangian numerical modelling of rapid multiphase sediment transport" E-proceedings of the 36th IAHR World Congress 28 June – 3 July, 2015, The Hague, the Netherlands.

4. Ehsan Jafari Nodoushan, Mohanna Tajnesaie, Saeed Farzin. (2012). Numerical investigation of flow in sedimentation basin and optimization of basin geometry using neural fuzzy model and genetic algorithm, 11th Iran Hydraulics Conference, Urmia, Iran.

5. Saeed Farzin, Khosrow Hosseini, Ehsan Jafari Nodoushan, Mohanna Tajnesaie. (2014). Using the computational fluid dynamics (Flow-3D) in the analysis of the dam break problem and comparison with the Lagrangian method (SPH), 13th Iran Hydraulics Conference, Iran University of Science and Technology, Tehran, Iran.

6. Ehsan Jafari Nodoushan, Mohanna Tajnesaie, Saeed Farzin. (2015). Numerical investigation of the flow in sedimentation basin and optimization of basin geometry using neural fuzzy model and genetic algorithm. 10th International Congress of Civil Engineering, Tabriz, Iran.

7. Mehdi Azhdari Moghadam, Mohammad Givehchi, Mohanna Tajnesaie. (2011). Numerical investigation of the effect of channel aspect ratio on hydraulic flow parameters in trapezoidal open channel, 6th National Congress of Civil Engineering, Semnan, Iran.

8. Mehdi Azhdari Moghadam, Mohanna Tajnesaie, Mohammad GivehChi, Ehsan Jafari Nodoushan. (2011). The application of experimental, theoretical and computational fluid dynamics (CFD) in the investigation of secondary flows, 6th National Congress of Civil Engineering, Semnan, Iran.
9. Mehdi Azhdari Moghadam, Nosratolah Amanian, Ehsan Jafari Nodoushan, Mohanna Tajnesaie. (2010). Using CFD methods to determine the parameters of the congressional overflow, the first conference of applied research on Iranian water resources, Kermanshah, Iran.
10. Mehdi Azhdari Moghadam, Nosratolah Amanian, Ehsan Jafari Nodoushan, Mohanna Tajnesaie. (2010). Investigating the effects of upstream and downstream slope of the cross-section on the flow coefficient in the triangular concourse spillway using CFD method, 9th Iran Hydraulics Conference, Tarbiat Modares University, Tehran, Iran.
11. Ehsan Jafari Nodoushan, Mohanna Tajnesaie. (2016). Evaluation of the performance of WCMPS Lagrangian method and Eulerian method in simulating large deformations. 15th Iranian Hydraulic Conference, Qazvin, Iran.

• Teaching and employment Experiences

Campus of Bijar, University of Kurdistan, Iran
- Adjunct professor Since January 2020

Bijar Branch, Islamic Azad University, Bijar, Iran
- Assistant Professor Since June 2010

Bijar Payame Nour University, Bijar, Iran
- Adjunct professor Since September 2010- September 2013

• Research Interests

- Computational Hydraulics and Fluid Dynamics
- River Mechanics
- Sediment Transport
- Meshfree particle method
- Multiphase Flow
- Optimization
- Hydrology

• Skills

Technical: Computational Hydraulics and Fluid Dynamics, River Mechanics, Sediment Transport, Multiphase Flow, Optimization
Software: Microsoft Office, AutoCAD, CFX, Flow3D, MATLAB
Programming Language: C++

• Proposals

- Numerical Investigation of Secondary Current Cells, Velocity and Shear Stress Distribution in Trapezoidal Channels Flow, University of Sistan & Baluchestan, Zahedan, Iran.
- Development of Moving Particle Semi-implicit model (MPS) using $\mu(I)$ rheology model for 3D simulation of dry and wet granular flow in landslides, University of Semnan, Semnan, Iran.
- Numerical modeling of flow over ogee spillway by mesh free method (Case study: dams of Khorasan Razavi), Khorasan Razavi Regional Water Authority, Mashhad, Iran.

- **Memberships and Professional Affiliations**

- Assistant Professor of Civil Engineering, Bijar Branch, Islamic Azad University, Bijar, Iran
- Iranian Organization for Engineering Order of Building, Since July 2016

- **Honors**

- Obtaining the 269th rank of Region 3 in the math-physics group national exam in 2003
- Obtaining the second rank in the master's degree in 2010
- Received the award for the second best researcher for professors of Kurdistan Azad University, 2015

- **References**

Dr. Ahmad Shakibaeinia
Associate Professor, Department of Civil, Geological and Mining Engineering, Polytechnique Montreal, Montreal,Canada

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Dr. Mehdi Azhdary Moghaddam
Associate Professor, Department of Civil Engineering, University of Sistan and Baluchestan, 98155-987, Zahedan, Iran
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