Mohammad Najafzadeh

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Department of Civil Engineering
Graduate University of Advanced Technology-Kerman
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Date of Birth

June 4, 1984

Education

2010-2013

- Ph.D. Department of Civil Engineering, Engineering Faculty, Shahid Bahonar University of Kerman, Kerman, Iran
  - PhD Thesis: GMDH Network to Predict Scour Depth around Hydraulic Structures.
  - Supervisor: Prof. G.A. Barani,
  - Total GPA : 18.9 out of 20

2007-2009

- M.Sc. Student, Department of Water Engineering, Faculty of Agricultural Engineering, Shahid Bahonar University of Kerman, Kerman, Iran
  - M.Sc Thesis: Numerical and Experimental Study of Scour Depth around a Vertical Pile in Cohesive Soils.
  - Supervisor: Prof. Gh.A. Barani,
  - Total GPA: 16.09 out of 20

2003-2007

- B.Sc. Student, Department of Water Engineering, Faculty of Water Science Engineering, Shahid Chamran University of Ahwaz, Ahwaz, Iran
  - Total GPA: 16.44 out of 20

Teaching Experience

Teaching Fluid Mechanics, Fundamental Thermodynamics, Heat Transfer, Open-Channel Hydraulic, Design of Hydraulic Structures, Elasticity and Plasticity Theorem, Advanced Open Channel Hydraulic, Fracture Mechanics, Advanced Ground Water; Hydraulic Lab, Computer Programming, Dynamics, in several Universities mentioned below:

1- Shahid Chamran University of Ahwaz
2- Kerman Graduate University of Advanced Technology

Publications (Journal Papers):

1.Najafzadeh, M., Barani, G.A., 2011. Comparison of group method of data handling based genetic programming and back propagation systems to predict scour depth around bridge piers. Scientia Iranica, Transactions A: Civil Engineering, Elsevier 18(6), 1207-1213.

2. Najafzadeh, M., Azamathulla, H.Md., 2013. Group Method of Data Handling to Predict Scour Depth Around Bridge Piers. Neural Computing and Applications, Springer. 23(7-8), 2107-2112.

3. Najafzadeh, M., Barani, G.A., Hessami-Kermani, M.R., 2013. Abutment scour in live-bed and clear-water using GMDH Network. Water Science and Technology, IWA 67(5), 1121-1128.

4. Najafzadeh, M., Barani, G.A., 2013. Discussion of "Genetic Programming to Predict River Pipeline Scour" by H. Md. Azamathulla and Aminuddin Ab Ghani. Journal of Pipeline Systems Engineering and Practice, ASCE 4(4), 07013001.

5. Najafzadeh, M., Barani, G.A., Azamathulla. H.Md., 2013. GMDH to Predict Scour Depth around Vertical Piers in Cohesive Soils. Applied Ocean Research. Elsevier 40, 35-41.

6. Najafzadeh, M., Barani, G.A., Hessami Kermani, M.R., 2013. GMDH Network Based Back Propagation Algorithm to Predict Abutment Scour in Cohesive Soils. Ocean Engineering. Elsevier 59, 100-106.

7. Najafzadeh, M., Barani, G.A., Hessami-Kermani,M.R., 2013. Group Method of Data Handling to Predict Scour Depth around Vertical Piles under regular Waves. Scientia Iranica, Elsevier 30 (3), 406-413.

8. Najafzadeh, M., Barani, G.A., Hessami-Kermani, M.R., 2014. GMDH Networks to Predict Scour at Downstream of a Ski-Jump Bucket. Earth Science Informatics, Springer 7(4), 231-248.

9. Najafzadeh, M., Barani, G.A., 2014. Experimental Study of Local Scour Depth around Vertical Pier in Cohesive Soils. Scientia Iranica, Transaction A, 21(2), 241-250.

10. Najafzadeh, M., Barani, G.A., Azamathulla,H. Md., 2014. Prediction of Pipeline Scour Depth in Clear-Water and Live-Bed Conditions using GMDH. Neural Computing and Applications, Springer, 24(3-4), 629-635.

11. Najafzadeh, M., Azamathulla, H.Md., 2013. Neuro-Fuzzy GMDH Systems to Predict the Scour Pile Groups Due to Waves. Journal of Computing in Civil Engineering-ASCE (Permalink: http://dx.doi.org/10.1061/(ASCE)CP.1943-5487.0000376)

12. Kaydani, H., Najafzadeh, M., Mohebbi, A., 2014. Wellhead Chokes Performance in Oil Wells Pipelines System Based on Genetic Programming. Journal of Pipeline Systems Engineering and Practice., ASCE 5(3), 06014001.

13. Najafzadeh, M., Lim, S.-.Y., 2015. Application of Improved Neuro-fuzzy GMDH to Predict Scour Downstream of Sluice Gates. Earth Science Informatics,Springer, 8(1), 187-196.

14. Najafzadeh, M., Barani, G.A., Hessami-Kermani, M.R., 2014. Estimation of Pipeline Scour due to Waves by the Group Method of Data Handling. Journal of Pipeline Systems Engineering and Practice, ASCE 5(3), 06014002.

15. Kaydani, H., Najafzadeh, M., Hajizadeh, A. 2014. A New Correlation for Calculating Carbon Dioxide Minimum Miscibility Pressure based on Multi-Gene Genetic Programming. Journal of Natural Gas Science and Engineering-Elsevier, 21, 625-630.

16. Najafzadeh, M., 2015. Neuro-Fuzzy GMDH System based Particle Swarm Optimization for Prediction of Scour Depth at Downstream of Grade Control Structures. Engineering Science and Technology, An International Journal-Elsevier. 18(1), 42-51.

17. Najafzadeh, M., Zahiri, A., 2015. Neuro-Fuzzy GMDH Based Evolutionary Algorithms to Predict Flow Discharge in Straight Compound Channels. Journal of Hydrologic Engineering, ASCE (*DOI: 10.1061/(ASCE)HE.1943-5584.0001185*).

18. Najafzadeh, M., 2015. Neurofuzzy-Based-GMDH-PSO to Predict the Scour Depth at Equilibrium at Culvert Outlets. Journal of Pipeline Systems Engineering and Practice, ASCE (DOI: 10.1061/(ASCE)PS.1949-1204.0000204).

19. Najafzadeh, M., 2015. Neuro-fuzzy GMDH Based Evolutionary Algorithms to Predict the Scour Pile under Clear-Water Condition. Ocean Engineering-Elsevier, 99, 85-94.

20. Najafzadeh, M., Barani, G.A., Hessami-Kermani, M.R., 2015. Evaluation of GMDH networks for Prediction of Local Scour Depth at Bridge Abutments in Coarse Sediments with Thinly Armored Beds. Ocean Engineering, Elsevier.104, 387-396.

21. Najafzadeh, M., Sattar, A.A., 2015. Neuro-Fuzzy GMDH Approach to Predict Longitudinal Dispersion in Water Networks. Water Resources Management, Springer. 29(7), 2205-2219.

22. Najafzadeh, M., Bonakdari, H., 2016. Application of Neuro-Fuzzy GMDH Model for Predicting the Velocity at Limit of Deposition in Storm Sewers. Journal of Pipeline Systems Engineering and Practice, ASCE 10.1061/(ASCE)PS.1949-1204.0000249 , 06016003.

23. Najafzadeh, M., Tafarojnoruz, A., 2016. Neuro-Fuzzy GMDH based Particle Swarm Optimization to Predict Longitudinal Dispersion Coefficients in Rivers. Environmental Earth Sciences, Springer. 75 (157),1-16.

24. Najafzadeh, M., Etemad-Shahidi, A., Lim, S.-.Y., 2016. Prediction of Scour Depth in Long Contractions using ANFIS and SVM. Ocean Engineering, Elsevier. 111, 128-135.

25. Najafzadeh, M., Rezaie-Balf, M., Rashedi, E. 2016. Prediction of Maximum Scour Depth around Piers with Debris Accumulation Using EPR, MT, and GEP Models. Journal of Hyroinformatics, IWA 18 (5) 867-884.

26. Najafzadeh, M., Laucelli, D. B., Zahiri, A., 2017. Application of Model Tree and Evolutionary Polynomial Regression for Evaluation of Sediment Transport in Pipes. Korean society of Civil Engineering. 21 (5), 1956-1963

27. Najafzadeh, M., TafarojNorouz, A., Lim, S.Y. 2017.Prediction of local scour depth downstream of sluice gates using data driven models. ISH Journal of Hydraulic Engineering, Taylor and Francis. 23 (2), 195-202.

28. Najafzadeh, M. Saberi-Movahed, F. Sarkamaryan, S. 2017. NF-GMDH Systems based Evolutionary Algorithms for Evaluation of Bridge Pier Local Scour Depth with Debris Effects. Marine Georesources & Geotechnology. 1-14.

29. Zahiri, A., Najafzadeh, M. 2017. Optimized expressions to evaluate the flow discharge in main channels and floodplains using evolutionary computing and model classification. International Journal of River Basin Management, 1-10.

30. Najafzadeh, M., Shiri, J., Sadeghi, G., Ghaemi, A. 2017. Prediction of the Friction Factor in Pipes Using Model Tree. ISH Journal of Hydraulic Engineering, Taylor and Francis. 1-7.

31. Najafzadeh, M., Shiri, J., Rezaie-Balf, M. 2017. New Expressions-Based Models to Estimate Local Scour Depth at Equilibrium and Clear Water Conditions in Rectangular Channels. Marin Georesources and Geotechnology, Taylor& Francis. 1-9.

32.Najafzadeh, M., Sarkamaryan, S. 2018. Extraction of Optimal Equations for Evaluation of Pipeline Scour Depth due to Currents: Application of Data Driven-Models. Maritime Engineering, ICE (Accepted).

33. Najafzadeh, M., Saberi-Movahed, F. 2018. GMDH-GEP to Predict Free Span Expansion Rates below Pipelines under Waves. Marine Georesources & Geotechnology. 1-30.

34. Najafzadeh, M, 2018. Incorporation of the Simplified Expressions to Estimate the Conjugate Depths of Hydraulic Jump in a Circular Pipe: An Application of Evolutionary Computing and Model Classification. Journal of Pipeline Systems Engineering and Practice, ASCE (Accepted).

35. Najafzadeh, M., Rezaie-Balf, M., Tafarojnorouz, A. 2018. Prediction of riprap stone size under overtopping flow using data-driven models. International Journal of River Basin Management, 1-10.

Research Interest

1-Experimental Study of Scour in Cohesive Soils in Marine Environments

2-Scour and Cavitation Modeling by Computational Fluid Dynamic Codes (CFD)

3- Artificial Intelligence

Regular Reviewer:

1-Journal of Pipeline Systems Engineering and Practice, ASCE (15)

2-Journal of Irrigation and Drainage Engineering, ASCE (2)

3-Journal of Hydrologic Engineering, ASCE (5)

4- Water Science and Technology, IWA (30)

5- Neural Computing and Applications, Springer (25)

6-Acta Geodynamica et Geomaterialia (1)

7- Water Resources Management, Springer (10)

8-Journal of Hydrology, Elsevier (6)

9- Measurement, Elsevier (2)

10- Journal of Natural Gas Sciences and Research, Elsevier (2)

11-Energy Efficiency, Springer (2)

12-Journal of Coastal Conservation, Springer (2)

13- Water Science and Technology: Water Supply, IWA (60)

14-Ocean Engineering, Elsevier (10)

15-KSCE, Springer (4)

16-Flow Measurement and Instrumentation, Elsevier (6)

17-Journal of Engineering Mechanics-ASCE (2)

18-Applied Mathematics and Computations, Elsevier (2)

19-Applied Water Science, Springer (4)

20-Urban water Journal, Taylor & Francis (4)

21-Europian Journal of Environmental and Civil Engineering, Taylor & Francis (5)

22- Engineering Applications of Computational Fluid Mechanics, Taylor & Francis (2)

23- Scientia Iranica (30)

24-Ecological Engineering, Elsevier (2)

25-Irrigation and Drainage, Taylor and Francis (2)

26- Ain Shams Engineering Journal, Elsevier (5)

27- Engineering Optimization, Taylor and Francis (2)

28- Water Science Engineering, Taylor and Francis (30)

29-Hydrology Research, IWA (5)

30- ISH Journal of Hydraulic Engineering, Taylor and Francis (15)

31-Journal of Hydroinformatics, IWA (10)

32-Climate Change, Springer (5)

33-Iranian Journal of Science and Technology, Springer (10)

34-Theoretical and Applied Climatology, Springer (5)