

Curriculum Vitae

Amir Ahmad Dehghani

Associated Professor



A) PERSONAL INFORMATION

Date of birth: 31-09-1976

Place of Birth: ESFAHAN, IRAN

Marital stage: MARRIED (Having two children)

Web Page: <http://dehghani.profcms.gau.ac.ir/?newlang=eng>

<https://scholar.google.com/citations?user=PPiyoBcAAAAJ&hl=en>

Office: Department of Water Engineering, Faculty of Soil and Water Engineering, Gorgan University of Agricultural Sciences & Natural Resources (GAU), Gorgan 49138-15739, Golestan Province, Iran.

Email: a.dehghani@gau.ac.ir;

Alternative Email: amirahmad.dehghani@gmail.com

Phone: +981732426436

Fax: +981732426436

B) RESEARCH INTERESTS:

- 1) River Hydraulic and Hydrodynamics
- 2) Sediment Transport and Scouring
- 3) Physical Modeling of Hydraulic Structures
- 4) Numerical Simulation of Flow and Sediment Interaction
- 5) Eco hydraulics and Hydro informatics

C) EDUCATIONAL RECORDS

Degree	Institute	Field	Date
B.Sc.	Isfahan University of Technology (IUT)	Civil Engineering	1999
M.Sc.	Isfahan University of Technology (IUT)	Civil-Water Engineering	2001
Ph.D	Tarbiat Modarres University (TMU)	Civil-Water Engineering (Hydraulic Engineering)	2006

D) HONORS

Excellent Master Graduated, Isfahan University of Technology, Isfahan, Iran, 2001.

Iranian Ph.D Student Fellowship, Iranian Ministry of Science and Technology, Tarbiat Modares University, 2001.

Excellent Ph.D. Student, Department of Civil Engineering (TMU), Tarbiat Modares University, Tehran, Iran. 2003.

Iran's National Elites Foundation member since 2003.

Selected in Iranian national festival of excellent student, 2004.

Selected excellent student in Tehran province, 2003.

Selected Teacher Award, Gorgan University of Agricultural Sciences & Natural Resources (GAU), 2008.

Superior Researcher at Faculty of Soil and Water Engineering, Gorgan University of Agricultural Sciences & Natural Resources (GAU), 2010.

Superior Researcher at Faculty of Soil and Water Engineering, Gorgan University of Agricultural Sciences & Natural Resources (GAU), 2011.

Superior Researcher in research grants attraction at Gorgan University of Agricultural Sciences & Natural Resources (GAU), 2011.

Superior Researcher at Iran construction engineering organization (IRCEO), 2012.

Superior Researcher at Faculty of Soil and Water Engineering, Gorgan University of Agricultural Sciences & Natural Resources (GAU), 2012.

Superior Researcher at Gorgan University of Agricultural Sciences & Natural Resources (GAU), 2013.

First rank of invention festival of Golestan province National Elites Foundation. 2013.

Superior Researcher of academic staff in Golestan province, 2015.

Superior Researcher of academic staff in Golestan province, 2016

Superior Researcher of academic staff in Golestan province, 2017

E) MEMBERSHIP OF SCIENTIFIC SOCIETIES

- 1) Member of Iranian Hydraulic Association
- 2) Member of Iranian Association of Irrigation and Drainage
- 3) Member of Iranian construction engineering organization (IRCEO)
- 4) Member of Japanese Society of Civil Engineers

F) REFERREE FOR JOURNAL ARTICLE SUBMITTED TO:

1. IAHR Hydraulic Research
2. Water Resource Management
- 3- Korean Society of Civil Engineers (KSCE)
- 4- Journal of Hydrology
- 5- River Research and Applications
- 6- Urban Water Journal
- 7- International Journal of Natural Resources and Marine Sciences, IJNRMS (ECOPERSIA)
- 8- Caspian journal of Applied Science research
- 9- International Journal of Environmental Resources Research

- 10- Journal of Marine Science and Technology
11. Journal of Natural Resources, University of Tehran, Iran
12. Journal of JOURNAL OF WATER AND SOIL CONSERVATION (JOURNAL OF AGRICULTURAL SCIENCES AND NATURAL RESOURCES), University of Gorgan, Iran
13. Research Journal of Watershed Management, Agricultural Science and Natural Resources University of Sari, Iran
14. Journal of Marine Sciences, Tarbiat Modares University, Iran
15. Journal of Agricultural Engineering Research, Iran
16. Journal of Watershed Management Science and Engineering, Iran
17. Journal of Watershed Sciences and Engineering, Iran
18. Journal Agricultural Science and Technology Journal, Ferdowsi University of Mashhad
19. Journal of Water Research, Shahrekord University
20. Journal of Water Science, Azad Eslami University Research Branch, Iran
21. Caspian Journal of Environmental Science, Iran
22. Iranian Journal of Irrigation and Water Engineering
23. International Journal of Environmental Resources Research, Gorgan University, Iran
24. International Journal of Water Resources and Environmental Engineering, Academic Journals
- 25- Modarres Journal of Civil Engineering
- 26- Iranian Hydraulic Association Journal
- 27- Journal of Science and Technology of Agriculture and Natural Resources, Water and Soil Science, IUT, Iran.

G) BOOKS:

- 1- Chamani, M. R., Dehghani, A. A., Beirami, M. K., & Gholopour, R. (2010). Basic Assignments in Fluid Mechanics & Hydraulics (Vol. 1). Iran: Arkan Danesh.
- 2- Chamani, M. R., Dehghani, A. A., Beirami, M. K., & Gholopour, R. (2009). *Fluid Mechanics* (S. Pourshahabi Ed. 2 ed. Vol. 1). Iran: Isfahan University of Technology Publication Center.
- 3- A Zahiri, AA Dehghani, HM Azamathulla. 2015. Application of gene-expression programming in hydraulic engineering, Handbook of Genetic Programming Applications, Springer International Publishing, 71-97.

H) International Articles:

Journal Articles – In English:

Ghaderi, K., Motamedvaziri, B., Vafakhah, M., Dehghani, A. A. [Regional flood frequency modeling: a comparative study among several data-driven models](#). 2019. Arabian Journal of Geosciences 12 (18), 588

Eshkou, Z., Dehghani, A. A., and Ahmadi, A. 2018. [Forced Hydraulic Jump in a Diverging Stilling Basin Using Angled Baffle Blocks](#). Journal of Irrigation and Drainage Engineering (ASCE), 144 (8): 06018004.

- Asnaashari, A., Dehghani, A. A., Akhtari, A. A. and Bonakdari, H. 2018. [Experimental and Numerical Investigation of the Flow Hydraulic in Gradual Transition Open Channels](#) *Water Resources* 45 (4), 565-577
- Tajari, M., Dehghani, A. A., Meftah Halaghi, M. 2018. [Semi-analytical solution and numerical simulation of water surface profile along duckbill weir](#). *ISH Journal of Hydraulic Engineering*.
- Mohammad Reza Pour, O. Zarindast, N., Mir, N. & Dehghani, A. A. 2017. [Using Fe magnetic nanoparticles for reducing evaporation from water surface in small scale](#). *DESALINATION AND WATER TREATMENT*. 71. 380-387.
- Pahlavani h, Dehghani AA, Bahremand AR, Shojaei, S. 2017. [Intelligent estimation of flood hydrographs using an adaptive neuro-fuzzy inference system \(ANFIS\)](#). *Modeling Earth Systems and Environment* 3 (1), 35.
- Hosseini M, Movahedi Naeini SA, Dehghani AA, Khaledian Y. 2016. [Estimation of soil mechanical resistance parameter by using particle swarm optimization, genetic algorithm and multiple regression methods](#) *Soil and Tillage Research* 157:32-42 01.
- Ameri M, Dehghani AA, Ahmadi A. 2016. [Elementary discharge coefficient of a triangular-rectangular sharp-crested side weir in subcritical flow](#) *International Journal of River Basin Management* 14(1):95-102 02.
- Asnaashari A, Akhtari AA, Dehghani AA, Bonakdari H. 2016. [Effect of inflow froude number on flow pattern in channel-expansive transitions](#) *Journal of Irrigation and Drainage Engineering* 142(1).
- Ameri M, Ahmadi A, Dehghani AA. 2015. [Discharge coefficient of compound triangular-rectangular sharp-crested side weirs in subcritical flow conditions](#) ,*Flow Measurement and Instrumentation* 45:170-175.
- Pahlevani H, Bahremand AR, Sadoddin A, Dehghani AA. 2014. [Efficiency of Artificial Neural Networks \(ANNs\) in intelligent estimation of flood hydrograph for Shirindarreh reservoir dam in comparison with Adaptive Neuro-Fuzzy Inference System \(ANFIS\)](#) ,*Sustainable Watershed Management*, 127-131.
- Dehghani AA, Haddadchi A, Omid MH, Movahedi N. 2014. [Applicability of MEP and SEMEP for computing total sediment load \(Case Study: Chelichay Catchment in Golestan Province\)](#) ,*KSCE Journal of Civil Engineering* 18(6):1912-1919.
- Haddadchi, A. Omid MH, Dehghani AA. 2013. [Total load transport in gravel bed and sand bed rivers case study: Chelichay watershed](#). *INTERNATIONAL JOURNAL OF SEDIMENT RESEARCH* 28(46): 253-253.
- Haddadchi A, Omid MH, Dehghani AA. 2013. [Bedload equation analysis using bed load-material grain size](#) ,*Journal of Hydrology and Hydromechanics* 61(3):241-249.
- Dehghani AA, Azamathulla HM, Hashemi Najafi SA, Ayyoubzadeh SA. 2013. [Local scouring around L-head groynes](#) ,*Journal of Hydrology* 504:125-131.

- Haddadchi A, Movahedi N, Vahidi E, Omid MH, Dehghani AA. 2013. **Evaluation of suspended load transport rate using transport formulas and artificial neural network models (Case study: Chelchay Catchment)**, Journal of Hydrodynamics **25**(3):459-470.
- Dehghani AA, Esmaili T, Chang WY, Dehghani N. 2013. **3D numerical simulation of local scouring under hydrographs**, Water Management **166**(3):120-131.
- Bagheri S, Zahiri AR, Ghobadian R, DEHGHANI A, Meftah Halaghi M. 2013. **Experimental Investigation of Discharge Coefficient for Compound Sharp Crested Side Weirs**, Journal of Water and Soil Conservation **20**(1):133-150.
- Haddadchi A, Omid MH, Dehghani AA. 2012. **Assessment of bed-load predictors based on sampling in a gravel bed river**, Journal of Hydrodynamics **24**(1):145-151.
- Pirestani MR, Shafaghati M, Dehghani AA. 2011. **Assessment of the environmental destructive effects of building dams**, World Academy of Science, Engineering and Technology **80**:374-378.
- Aarabi MJ, Chamani MR, Dehghani AA, Asghari K. 2011. **Numerical simulation of temporal evolution of local scour in bridge pier with nonuniform sediment**, Advanced Materials Research. 250-253: 3610-3614.
- Norouzi M, Ayoubi S, Jalalian A, Khademi H, Dehghani AA. 2010. **Predicting rainfed wheat quality and quantity by artificial neural network using terrain and soil characteristics** Acta Agriculturae Scandinavica Section B: Soil and Plant Science **60**(4):341-352.
- Khalilmoghadam B, Afyuni M, Abbaspour KC, Jalalian A, Dehghani AA, Schulin R. 2009. **Estimation of surface shear strength in Zagros region of Iran - A comparison of artificial neural networks and multiple-linear regression models** Geoderma **153**(1-2):29-36.
- Dehghani AA, Ghodsian M, Suzuki K, Alaghmand S. 2008. **Local scour around lateral intakes in 180 degree curved channel** Advances in Water Resources and Hydraulic Engineering, 821-825.
- Chamani MR, Beirami MK, Rajaratnam N, Dehghani AA. 2008. **Characteristics of subcritical flow over vertical drops with sloping aprons** Iranian Journal of Science and Technology, Transaction B: Engineering **32**(5):531-542.

Journal Articles – In Farsi:

1. Movahedi, N., Dehghani, A. A. Schmidt, C., Trauth, N., Meftah, M. [Comparison of Hyporheic Exchanges in 2D and 3D Riffle-Pool](#). 2019. Amirkabir Journal of Civil Engineering
2. Movahedi, N., Dehghani, A. A. Schmidt, C., Trauth, N., Meftah, M. [Laboratory and numerical investigation of hyporheic flow in riffle-pool bed form](#). 2019. Iranian Journal of ECO Hydrology 6 (1), 191-204.
3. Jamali, S., Dehghani, A. A., Zahiri, A., Trauth, N., and Schmidt, C. [Experimental investigation of surface and sub-surface flow interaction in a middle bar](#). 2019. Iranian Journal of ECO hydrology 6 (2), 323-339.
- 4.

5. Eshkou, Z., and Dehghani, A. A. Experimental Investigation of the Characteristics of Hydraulic Jump in a Diverging Stilling Basin with an Adverse Slope Using Baffle Blocks, JWSS-Isfahan University of Technology.2019. 23 (3), 299-311
6. Zahiri. A., Gholinejad, J., Dehghani, A. A. Prediction of Sediment Transport Capacity in Rivers Using Quasi Two-Dimensional Mathematical Model Journal of Watershed Management Research, 2019. 10 (19), 142-153.
7. ASNAASHARI, A., DEHGHANI, A. A. and AKHTARI, A. Study of Flow Hydraulics in Expansive Gradual Transitions Open Channels. JOURNAL OF CIVIL AND ENVIRONMENTAL ENGINEERING (UNIVERSITY OF TABRIZ) 2019.
- 8.
- 9.
- 10.
11. Mehnatkesh A, Ayoubi S, Dehghani AA. **Determination of the Most Important Factors on Rainfed Wheat Yield by Using Sensitivity Analysis in Central Zagros.** Iranian Journal of Field Crops Research. 2017;15(2):257-66.
12. Mehnatkesh A, Ayyubi S, Jalalyan A, A.A. Dehgani AA. **Comparison of multivariate linear regression and artificial neural networks models for estimating of rainfed wheat yield in some central Zagros areas.** Iranian Dryland Agronomy Journal. 2016;5(2):119-33.
13. Rahimi L, Dehghani AA, Ghorbani K. **Comparison of Total flow, Base flow and Water-Quality Characteristics Trend in Arazkuseh Hydrometric Station.** journal of watershed management research. 2016;7(13):91-83.
14. Ghorbani K, Salarijazi M, Dehghani AA. **Estimation of monthly discharge using climatological and physiographic parameters of ungauged basin.** Journal of Water and Soil Conservation. 2016;23(3):207-24.
15. Akhtari A, Asnaashari A, Dehghani A, Bonakdari H. **Numerical Investigation of the Effect of Inflow Froude Number on Flow Pattern in Expansive Gradual Transitions in Open Channels.** Water and Soil Science. 2017;26(4.2):97-108.
16. Hosseinpour S, Dehghani AA, Zahiri A, Shoriyan M, Meftah Halghi M. **Urban water management using of water resources planning MODSIM model.** Journal of Water and Soil Conservation. 2015;22(5):153-69.
17. Naeimi Kalourazi Z, Ghorbani K, Salarijazi M, Dehghani Aa. **Investigation of effect of basin's physiographic and climatic parameters in seasonal river flow simulation.** Iranian journal of Ecohydrology. 2016;3(4):545-55.
18. Pahlavan Rad MR, Dehghani AA, Shahriari A, Akbari Moghaddam AR, Dahmardeh K. **Predicting Spatial Variability of Soil Salinity and Clay Content Using Geostatistics and Artificial Neural Networks Methods.** Journal of Soil Management and Sustainable Production. 2016;6(1):247-54.
19. Khalili Moghadam B, Afyuni M, Jalalian A, Abbaspour KC, Dehghani AA. **Estimation of Soil Saturated Hydraulic Conductivity in Part of Central Zagroos Using Regression and ANNs method.** Journal of Water and Soil Science. 2015;19(71):217-28.
20. Amani M, Najafinejad A, Dehghani AA, Maramaei MG. **Site selection suitable for earth small dam by use criterion elimination and AHP (Kal Aji Watershed, Golestan Province).** Journal of Water and Soil Conservation. 2015;22(1):231-49.

21. Ameri M, Ahmadi A, Dehghani AA. **Determination of discharge coefficient of compound triangular–rectangular sharp-crested side weirs.** Journal of Water and Soil Conservation. 2015;22(3):105-20.
22. Badiézadeh S, Bahremand A, Dehghani AA. **Urban flood management by simulation of surface runoff using SWMM model in Gorgan city, Golestan Province- Iran.** Journal of Water and Soil Conservation. 2016;22(4):155-70.
23. Eshkou Z, Ahmadi A, Dehghani AA. **Experimental investigation of the effects of block inclinations on the hydraulic jump characteristics in the stilling basin USBR III.** Journal of Water and Soil Conservation. 2016;22(4):231-42.
24. Kaheh M, Dehghani AA, Kaheh M, Zahiri A. **Simulation of Flow hydraulic in combined weir – gate structure by Flow3D.** Journal of Water and Soil Conservation. 2015;22(1):111-29.
25. Salamati S, Dehghani AA, Meftah Halaghi M, Zahiri A. **Estimation of Discharge Coefficient of Combined Weir- Gate Structure by Genetic Programming.** Journal of Water and Soil Conservation. 2015;22(2):255-63.
26. Zahedianfar F, Ghorbani K, Meftah Halaghi M, Abdolhosseini M, Dehghani AA. **Flood Frequency Analysis on the basis of extreme values theory (Case Study: Arazkuseh hydrometric station, Golestan).** Journal of Water and Soil Conservation. 2015;22(3):121-35.
27. Toufani P, Fakheri fard A, Mosaedi A, Dehghani AA. **Prediction of precipitation applying Wavelet and ANN Model.** Journal of Range and Watershed Managment. 2015;68(3):553-71.
28. Faghih Mehrabani S, Meftah Halaghi M, Dehghani AA, Meskar H. **Numerical Simulation of Satarkhan Dam Reservoir Sedimentation using GSTARS 3.0.** Journal of Water and Soil Conservation. 2014;21(4):297-304.
29. Yousefi Jourdehi A, Sudagar M, Bahmani M, Hosseini SA, Dehghani AA, Yazdani MA. **Reproductive effects of dietary soy phytoestrogens, genistein and equol on farmed female beluga, Huso huso.** Iranian Journal of Veterinary Research. 2014;15(3):266-71.
30. Rahimi L, Dehghani AA, Ghorbani K, Abdolhosseini M. **Comparative Analysis of Time Series Models for Total Flow, Base-Flow and Runoff (Case study: Chehelchai River, Gloestan Province).** Journal of Water and Soil Conservation. 2014;21(3):55-77.
31. Abareshi F, Meftah Halghi M, Sanikhani h, Dehghani AA. **Comparison of three intelligence techniques for predicting water table depth fluctuations (Case study: Zarringol plain).** Journal of Water and Soil Conservation. 2014;21(1):163-80.
32. Movahedi N, Dehghani AA, Zahiri A, Aarabi MJ. **Investigation the efficiency of using bed sill in reduction of scour around single pier and side-by-side piers.** Journal of Water and Soil Conservation. 2015;21(6):191-205.
33. Movahedi N, Dehghani AA, Aarabi MJ, Zahiri A. **Experimental study of local scouring around two side-by-side piers with raft footing.** Journal of Water and Soil Conservation. 2014;21(1):199-215.
34. Tahmasebi Nasab M, Dehghani AA. **Evaluating the Accuracy of Conventional Methods Forestimating Bed-load Transport Rate Using Field Data.** Iranian Journal of Irrigation & Drainage 2014;8(1):116-26.

35. Rahimi L, Dehghani AA, Abdolhosseini M, Ghorbani K. **Flood Frequency Analysis Using Archimedean Copula Functions Based on Annual Maximum Series (Case Study:Arazkuseh Hydrometric Station in Golestan Province)**. Iranian Journal of Irrigation & Drainage 2014;8(2):353-65.
36. Rahimi L, Dehghani AA, Ghorbani K, Abdolhosseini M. **Investigation of total and base flow trend in Arazkuseh hydrometric station (Gorganrood Watershed in Golestan Province)**. Journal of Water and Soil Conservation. 2014;21(2):173-89.
37. Tamadoni Kenari S, Hesam M, Dehghani AA, Meftah Halaghi M. **Investigation of temporal variation of drought and its impacts on groundwater nitrate concentrations in drinking water wells (Case Study: Gorgan city and vicinity)**. Journal of Water and Soil Conservation. 2014;21(1):85-103.
38. Bagheri S, Zahiri A, Ghobadian R, Dehghani AA, Meftah Halaghi M. **Experimental investigation of discharge coefficient for compound sharp crested side weirs**. Journal of Water and Soil Conservation. 2013;20(1):133-50.
39. Eghbali P, Dehghani AA, Arvanaghi H, Meftah Halaghi M. **Investigation of foundation depth and shape effect on scouring amount around a bridge pier**. Journal of Water and Soil Conservation. 2013;20(4):273-82.
40. Maleknejad Yazdi M, Dehghani AA, Shahabi M. **Investigation of Darcy Weisbach coefficient in porous media of rock fill dam in laden sediment flow**. Journal of Water and Soil Conservation. 2013;20(4):99-122.
41. Sadeghi Z, Dehghani AA, Ghodsian M, Zahiri A, Montaseri H. **Elementary discharge coefficient of sharp crested rectangular side weir located in 180° channel bend in free flow conditions**. Journal of Water and Soil Conservation. 2014;20(6):47-65.
42. Tamaskani A, Zakerinia M, Hezarjeribi A, Dehghani AA. **Comparison of Base Flow separation methods from daily flow hydrograph (Case study: Upstream of Boostan dam catchment In Golestan province)**. Journal of Water and Soil Conservation. 2014;20(6):127-45.
43. Abdi Dehkordi M, Dehghani AA, Meftah M, Kahe M, Hesam M, Dehghani N. **Use of Fuzzy Clustering Algorithm for Estimating the Daily Suspended Load (Case Study: Kasilain Basin)**. Journal of Water and Soil Science. 2014;18(68):121-31.
44. Kaheh M, Dehghani AA. **Numerical Simulation of Hydraulic Jump on Corrugated Beds**. Journal of Water and Soil Conservation. 2013;20(5):41-60.
45. Gharekhani M, Dehghani AA, Gharekhani A, Jebraeili S, Ghorbani M. **Microwave-Assisted Extraction of Phenolic Compounds from Eucalyptus Camaldulensis Dehn Leaves and Estimation of Extraction Process by Artificial Neural Networks**. Journal of Iranian Plant Ecophysiological Reseach. 2013;7(28):70-80.
46. Nabizadeh M, Mosaedi A, Dehghani AA. **Performance of fuzzy logic in stream flow forecasting**. Journal of Range and Watershed Managment. 2012;65(4):569-80.
47. Gholinejad J, Zahiri A, Dehghani AA. **One and quasi two dimensional simulation of flood flows in rivers (Case Study: Gorganrood River at Aq-Qalla hydrometric station)**. Journal of Water and Soil Conservation. 2013;19(4):103-19.

48. Sadeghi Z, Dehghani AA, Ghodsian M, Zahiri A, Montaseri H. **Investigation of sharp-crested weir discharge coefficient in the lateral intake located at curve channel.** Journal of Water and Soil Conservation. 2013;19(4):47-65.
49. Zahiri A, Dehghani AA, Hezarjeribi A. **Determination of stage discharge curve for laboratory and river compound channels applying genetic algorithm.** Journal of Water and Soil Conservation. 2012;19(2):179-92.
50. Zahiri A, Abdolmajidi H, Ghorbani Koochi Kheili S, Dehghani AA. **Simulation of lateral velocity distribution in rivers using Finite Elements Method (Case study: Berentine hydrometric station in Minab River).** Journal of Water and Soil Conservation. 2012;19(2):63-79.

51. Bameri A, Khormali F, Kiani F, Dehghani AA. **Spatial variability of soil organic carbon on different slope positions of loess hillslopes in Toshan area, Golestan Province.** Journal of Water and Soil Conservation. 2012;19(2):43-61.
52. Sharifan H, Dehghani AA, Karimirad I. **Correction factor for Hargreaves-Samani method to estimate ETo(Case Study: Gorgan Synoptic Station).** Journal of Water and Soil Conservation. 2013;19(3):227-35.
53. Dehghani AA, Esmaeili T, Sadeghi Z. **Using time invariant flow condition for simulation of local scour depth around circular piers under time varying flow.** Journal of Water and Soil Conservation. 2013;19(3):99-121.
54. Nosrati Karizak F, Movahedi Naeni SA, Hezarjaribi A, Roshani GA, Dehghani AA. **Using Artificial Neural Networks to estimate saturated hydraulic conductivity from easily available soil properties.** Soil Management and Sustainable Production. 2012;2(1):95-110.
55. Nabizadeh M, Mosaedi A, Hesam M, Dehghani AA. **Comparing the Performance of Fuzzy Based Models in Stream Flow Forecasting on Lighvan River.** Journal of Water and Soil Conservation. 2012;19(1):117-34.
56. Pahlavani H, Bahremand A, Dehghani AA, Sadoddin A. **Assessing the efficiency of artificial neural network for intelligent estimation of flood hydrograph of Jafar Abad River in Gorgan (Short Technical Report).** Journal of Water and Soil Conservation. 2012;18(1):231-41.
57. Meftah Halaghi M, Dehghani AA, Mosaedi A, Eslami HR. **Estimation of shortage volume of Voshmgir reservoir in multi dam systems operation.** Journal of Water and Soil Conservation. 2012;18(1):215-31.
58. Zahiri AR, Shafai Bejestan M, Dehghani AA. **Estimation of sediment volume due to turbidity currents in Dez Reservoir Dam.** Journal of Water and Soil Conservation. 2012;18(1):143-63.
59. Ghabaei Sough M, Mosaedi A, Dehghani AA. **Solar radiation data and their intelligent modeling based on gamma test with evaluation of calibrated empirical equations.** Journal of Water and Soil Conservation. 2012;18(4): 185-208.
60. Hezarjaribi A, Dehghani AA, Hesam M, Sharifan H. **Estimation of the water distribution uniformity in sprinkler irrigation by using Genetic Algorithm Method.** Journal of Water and Soil Conservation. 2012;18(4):129-43.

61. Norozi B, Barani GA, Meftah halghi M, Dehghani AA. **A multi-reservoir system operation optimization using multi population genetic algorithms (Case study: Golestan and Voshmgir reservoirs)**. Journal of Water and Soil Conservation. 2012;18(4):43-62.
62. Haddadchi A, Omid M, Dehghani AA. **Evaluation of Bed Load Discharge Formulas in Alpine Gravel Bed Rivers (Case study: Chehel Chai river in Golestan province)**. Journal of Water and Soil Conservation. 2012;18(3):149-67.
63. Zanganeh M, Mosaedi A, Meftah Halaghi M, Dehghani AA. **Determination of Suitable Method for Estimating Suspended Sediments Discharge in Arazkoose Hydrometric Station (Gorganrood Basin)**. Journal of Water and Soil Conservation. 2011;18(2).
64. Khalil Moghadam B, Afyuni M, Jalalian A, Abbaspour KC, Dehghani AA. **Estimation Surface Soil Shear Strength by Pedo-Transfer Functions and Soil Spatial Prediction Functions**. Journal of Water and Soil Conservation. 2011 25(1).
65. Kermannezhad J, Fathi Moghadam M, Dehghani AA, Mahmoodian M. **Investigation of Effect Porosity on Scour Depth Around L-head Groins with Clapper Toward Downstream and Upstream under Clear Water Condition**. Journal of Water and Soil Conservation. 2011;25(2).
66. Dehghani AA, Piri M, Hesam M, Dehghani N. **Estimation of Daily Pan Evaporation By Using MLP,RBF and Recuurent Neural Networks**. Journal of Water and Soil Conservation. 2012;17(2):49-67.
67. Piri M, Hesam M, Dehghani AA, Meftah Halaghi M. **Experimental study on the effect of physical and chemical approach in reducing the evaporation from water surface**. Journal of Water and Soil Conservation. 2012;17(4):141-54.
68. Pahlevani H, Bahremand AR, Dehghani AA. **Evaluating the Effects of Different Input Signals on Efficiency Coefficients of Artificial Neural Network Models for Intelligent Estimation of Flood Hydrographs**. Iranian Jornal of Watershed Management Science&Engineering. 2010;4(11):45-8.
69. Dehghani AA, Malek Mohammadi M, Hezarjaribi A. **Estiamtion of Suspended Sediment Load in Behesht Abad River by Using Artiftitial Neural Network**. Journal of Water and Soil Conservation. 2012;17(1):159-68.
70. Piri M, Hesam M, Dehghani AA, Meftah Halaghi M, Ghazali AA. **Determining of effect of using heavy alcohols on reduction of evaporation in water storage surface**. Journal of Agric Sci Natur Resour. 2009;16(Special issue 2).
71. Meftah Halaghi M, Azizi M, Dehghani AA, Alhoseini N. **Energy Dissipation of Gabion Stepped Weirs by Using Impermiable Plates**. Journal of Agric Sci Natur Resour. 2009;16(Special issue 2):234-41.
72. Montaseri H, Ghodsian M, Dehghani AA. **Experimental Study on turbulent flow field around submerged vanes at a lateral diversion in a U shape rectangular channel bend**. Journal of Agric Sci Natur Resour. 2009;16(Special issue 2):221-33.
73. Dehghani AA, Barzali M, Fazloula R, Zea Tabar Ahmadi MK. **Experimental study of scouring around a series of L-head groynes**. Journal of Water and Soil Conservation. 2012;16(3):141-62.

74. Ghanbari F, Shataee S, Dehghani AA, Ayoubi S. **Tree Density Estimation of Forests by Terrain Analysis and Artificial Neural Network.** Journal of Wood and Forest Science and Technology. 2012;16(4):25-42.
75. Dehghani AA, Hashemi Najafi SF, Ayoubzadeh SA, Meshkati ME. **Intelligent estimation of maximum local scour depth around L-head groynes by Artificial Neural Networks and Adaptive Neuro Fuzzy Inference System (ANFIS).** Journal of Water and Soil Conservation. 2012;16(1):143-61.
76. Eivazi M, Mosaedi A, Dehghani AA. **Comparison of different approaches for predicting SPI.** Journal of Water and Soil Conservation. 2012;16(2):145-67.
77. Dehghani AA, Meshkati Shahmirzadi ME. **Estimation of discharge coefficient of radial gates by using genetic algorithm.** Journal of Water and Soil Conservation. 2010;16(2):131-44.
78. Dayani M, Jafari S, Khalilmoghadam B, Dehghani AA. **Saline and Sodic mapping using Geostatistics Theory (A case study in western Karoon river land of Khozestan).** journal of Watershed Management Research (Pajouhesh & Sazandegi). 2012;25(1(94)):86-95.
79. Mohtasham M, Dehghani AA, Akbarpour A, Meftah Halaghi M, Etebari B. **Groundwater Level Determination by Using Artificial Neural Network (Case study: Birjand Aquifer)** Iranian Journal of Irrigation and drainage 2010;4(1):1-10.
80. Dehghani AA, Montazer GA, Nasiri F, Ghodsian M. **(Research note): Cross-section optimization of concrete gravity dams by using genetic algorithms and artificial neural networks.** Journal of Modares Technical and Engineering. 2006;-(25):99-112.
81. Dehghani AA, Ghodsian M, Salehi Neyshabouri SAA, Shafei Far M. **Study on river bed evolution in 180° alluvial channel bend.** journal of Hydraulics. 2007;-(2):1-16.
82. Beirami MK, Dehghani AA, Chamani MR. **Design of optimum cross section of broad crested weirs and determination of flow discharge coefficient.** Journal of Agric Sci Natur Resour. 2008;15(8):138-49.
83. Esmaeili T, Kharaghani S, Dehghani AA. **3D Numerical Study on Scouring Around Bridge Piers Under Unsteady Flow Condition.** Journal of Water Sciences Research. 2010;2(1):19-28.
84. Dehghani AA, Zanganeh M, Mosaedi A, Kouhestani N. **Comparison of Suspended Sediment Estimation by Artificial Neural Network and Sediment Rating Curve Methods (Case Study: Doogh River in Golestan Province).** Journal of Agric Sci Natur Resour. 2009;16(special issue1-A):266-76.
85. Hashemi Najafi SFA, Ayoubzadeh SA, Dehghani AA. **Experimental investigation of scour depth around L-head groynes under clear water condition.** Journal of Agric Sci Natur Resour. 2008;15(1(special issue on natural resources)):192-203.
86. Montaseri H, Ghodsian M, Salehi Neyshabouri SAA, Dehghani AA. **Experimental investigation of 3D flow field and scouring in a 180 degree bend rectangular channel with a lateral intake.** Journal of Agric Sci Natur Resour. 2008;15(2):225-40.

87. Zahiri A, Dehghani A. **Flow discharge determination in straight compound channels using ANN.** World Acad Sci Eng Technol. 2009;3(10):1-8.
88. Meshkati M, Dehghani A, Naser G, Emamgholizadeh S, Mosaedi A. **Evolution of developing flushing cone during the pressurized flushing in reservoir storage.** World Academy of Science, Engineering and Technology. 2009;3(10):1107-11.
89. Nabizadeh M, Mosaedi A, Hesam M, Dehghani AA, Zakerinia M, Meftah Halaghi M. **Prediction of River Flood Using Fuzzy Inference System (FIS) and Neuro-Fuzzy Inference System (ANFIS).** Iranian Journal of Watershed Management Science&Engineering. 2012;5(17):7-14.
90. Dehghani AA, Asgari M, Mosaedi A. **Comparison of Three Methods of Artificial Neural Network, Fuzzy Inference System, Comparative Neural Network, and Geostatistics in Finding Groundwater Levels (Case Study of Qazvin Plain).** Journal of Agric Sci Natur Resour. 2010;16(Special issue1-B):517-28.

IX) LIST OF PAPERS PRESENTED IN INTERNATIONAL CONGRESSES AND SEMINARS:

- 1- Dehghani AA, Ghodsian M, Fathi P. **Intelligent estimation of length of recirculating flow in sudden expansion by Artificial Neural Network.** The Ninth International Symposium on River Sedimentation; Yichang, China2004.
- 2- Dehghani AA, Ghodsian M, Neyshabouri AA, Shafiefar M. **Bed characteristics in 180° channel bend with lateral diversion.** XXXI- IAHR-International Congress on water engineering; At Seoul, South Korea2005.
- 3- Chamani MR, Dehghani AA, Beirami MK. **Characteristics of drops with sloping inverts.** 17th Canadian Hydrotechnical Conference; Edmonton, Alberta2005. p. 17-9.
- 4- Dehghani AA, Ghodsian M, Suzuki K, Neyshabouri AA. Transport of Sediment into a Channel Intake in River Bends. XXII Latin American Congress on Hydraulic; Ciudad Guayana, Venezuela2006.
- 5- Dehghani AA, Ghodsian M, Suzuki K, Neyshabouri AA. **Effect of Sill on local scour at lateral intake in 180 degree curved channel.** 3th International Conference on Scour and Erosion; Amesterdam, Netherlands2006.
- 6- Dehghani AA, Ghodsian M, Suzuki K, Salamatian A. **Intelligent Estimation of the Maximum Depth of Scour Hole around Bridge Piers in Cohesive Sediment using Artificial Neural Network.** 3th International Conference on Scour and Erosion; Amesterdam, Netherlands2006.
- 7- Dehghani AA, Suzuki K, Hashemi F, Salamatian A. Intelligent Estimation of the Discharge Coefficient of Canal Radial Gate Using Artificial Neural Network. IAHR-International Congress on water engineering; Venice, Itally2007.
- 8- Emami Y, Ghodsian M, Dehghani AA. Scouring around bridge piers in U shape channel. IAHR-International Congress on water engineering; Venice, Itally2007.
- 9- Feyzolah F, Ghodsian M, Dehghani AA. Discharge Coefficient of sluice gate in 180 degree channel bend. IAHR-International Congress on water engineering; Venice, Itally2007.
- 10- Pirestani MR, Majdzadeh Tabatabai MR, Dehghani AA, Suzuki K. Investigation of flow pattern and scouring in lateral intake of bend channels. 2th International Conference on Managing Rivers in the 21 th Centuray: Solutions Towards Sustainable River Basins; Malaysia2007.

- 11- Barzali M, Fazlola R, Dehghani AA, Ahmadi A. [Experimental Investigation of Local Scouring Around a Series of L-Head Groynes](#). Advances In Hydro-Science and Engineering; Nagoya, Japan2008.
- 12- Azizi A, Meftah Halaghi M, Dehghani AA, Suzuki K. Effect of Material Porosity On Energy Dissipation in Gabion Stepped Weirs. Advances In Hydro-Science and Engineering; Nagoya, Japan2008.
- 13- Hashemi Najafi SFA, Ayyoubzadeh SA, Dehghani AA, Suzuki K. Experimental Investigation on Local Scouring Around L-Head Groynes. River Flow Turkey2008.
- 14- Feyzolah F, Ghodsian M, Dehghani AA. Experimental investigation on discharge coefficient of side combining structure in 180 bend. River Flow Turkey2008.
- 15- Khalili Moghadam B, Jalali H, Afyouni H, Dehghani AA. Prediction of the Surface Soil Shear Strength in Semiarid rangeland Using PTFs. Eurosoil congress Swiss2008.
- 16- Khalil Moghadam B, Jalali H, Afyouni H, Dehghani AA. Estimating Saturated Hydraulic Conductivity In Semiarid Rangeland Using Artificial Neural Network. Eurosoil congress Swiss2008.
- 17- Esmaeili T, Dehghani A, Zahiri A, Suzuki K. [3D Numerical simulation of scouring around bridge piers \(Case Study: Bridge 524 crosses the Tanana River\)](#). World Academy of Science, Engineering and Technology; Venice, Italy2009. p. 1028-32.
- 18- Amin Nejad B, Sanei M, Sabagh R, Dehghani AA, Amin Nejad M. [Effect of Space between spur dikes on scour in flood plain](#). 9thICWR; Iran2009.
- 19- Aminnejad B, Sabbagh Yazdi SR, Saneie M, Dehghani AA. [Local scour at single abutment in floodplain](#). International Conference on Water Resources; Iran2009.
- 20- Meshkati M, Dehghani AA, Naser G, Emamgholizadeh S, Mosaedi A. [Experimental investigation of pressure flushing technique in reservoir storages](#). Proceeding of the 5th IASME/WSEAS International Conference on Water Resources, Hydraulics & Hydrology (WHH 10) Water and Geoscience; England2010.
- 21- Meshkati M, Dehghani A, Bashiri H. [Local scouring due to flow jet at downstream of rectangular sharp-crested weirs](#). Proceeding of the 5th IASME/WSEAS International Conference on Water Resources, Hydraulics & Hydrology (WHH 10) Water and Geoscience; England2010.
- 22- Dehghani AA, Sharifan H. [Intelligent estimation of daily evapotranspiration using](#). EGU General Assembly Conference Abstracts; Vienna, Austria2009. p. 12952.
- 23- Meshkati E, Dehghani AA, Bashiri H, Ahadpoor A. [Experimental investigation of scouring in downstream of combined flow over weirs and below gates](#). 33rd IAHR Conference; Canada2009. p. 978-94.
- 24- Dehghani AA, Esmaeili T, Kharaghani S, Pirestani MR. [Numerical simulation of scour depth evolution around bridge piers under unsteady flow condition](#). 33rd IAHR Congress: Water Engineering for a Sustainable Environment; Canada2009. p. 5888-95.
- 25- Dehghani AA, Barzali M, Suzuki K, Fazlola R. [Temporal Evolution of Scouring Around a Series of L-head Groynes](#). 33rd IAHR Congress: Water Engineering for a Sustainable Environment; Canada2009.
- 26- Meshkati Shahmirzadi ME, Dehghani AA, Sumi T, Naser GA. Study of scour half-cone characteristics in front of a sediment flushing outlet of a reservoir Riverflow 2010, Bundesanstalt für Wasserbau; Germany2010. p. 1267-73.
- 27- Bashiri H, Dehghani AA, deghghani N. [Downstream Scour of Combined Flow Over Weirs and Below Gates](#). Riverflow 2010, Bundesanstalt für Wasserbau; Germany2010. p. 1260-6.

- 28- Meshkati Shahmirzadi ME, Dehghani AA, Sumi T, Naser G. The effect of sediment deposited thickness on dimensions of pressure flushing cone. 11th international symposium on river sedimentation (ISRS); Stellenbosch, South Africa 2010.
- 29- Movahedi N, Dehghani AA, Zahiri A, Aarabi MJ. Reduction of local scour around side-by-side piers using bed sill. 12th International Symposium on River Sedimentation; Kyoto, Japan 2013.
- 30- Ghorbani F, Dehghani AA, Movahedi N, Zahiri A. [Effect of Sill Structure on Evolution of Scour Hole around side-by-side Piers.](#) 36th IAHR World Congress; At The Hague, the Netherlands 2015.
- 31- Movahedi N, Zahiri A, Dehghani AA. [Prediction of bed load transport rate using Shiono and Knight model. River Sedimentation:](#) Proceedings of the 13th International Symposium on River Sedimentation; Stuttgart, Germany: CRC Press; 2016. p. 337.
- 32- Robatjazi S, Dehghani AA, Meftah Halaghi M, Zahiri A, Movahedi N. [Effect of sill structure on scour pattern around tandem piers.](#) 11th International Symposium on Ecohydraulics (ISE 2016); Australia: Engineers Australia; 2016. p. 544.
- 33- Movahedi, N., Zahiri, A., and Dehghani, A.A. "Prediction of bed load transport rate using Shiono and Knight Model." 13th International Symposium on River Sedimentation. 2016, Stuttgart, Germany.

X) EXPERIENCES

- President of Golestan University of Applied Sciences and Technology since 2016.
 - Vice Chancellor for Education of Soil and Water Engineering Faculty, 2013-2015.
 - Associated professor at Gorgan University of Agricultural Sciences & Natural Resources (GAU), Gorgan, Iran since June 2012.
 - Member of Evaluation Committee of Water Engineering Department, Gorgan University of Agricultural Sciences & Natural Resources (GAU), since June 2011.
 - Vice Chancellor for Education of Mirdamad Higher Education Institute, since 2012-2013.
 - Vice Chancellor for Education of Laqmei Gorgan Higher Education Institute, 2010-2012.
- Head, Departments of Water Engineering since 2009 until May 2011, Gorgan University of Agricultural Sciences & Natural Resources.
- Assistant professor at Gorgan University of Agricultural Sciences & Natural Resources, Gorgan, Iran since 2006.

XI) COURSES TAUGHT:

- 1) Fluid mechanics (B.Sc.)
- 2) Open Channel Hydraulic (B.Sc., M.Sc)
- 3) Design of Hydraulic structures (B.Sc.)
- 4) Analysis of structures (B.Sc. and M. Sc)
- 5) River Engineering (M.Sc.)
- 6) Advanced Mathematics (M.Sc.)
- 7) Analysis of structures (B.Sc. and M. Sc)
- 8) Hydraulic of Sediment Transport (M.Sc.)
- 9) Computational Fluid Dynamics (M.Sc. and Ph.D)
- 10) Hydraulic and Physical Modelling (Ph.D)

- 11) Novel techniques in Water Resource Engineering (M.Sc.)
- 12) Ground water Engineering (M.Sc.)
- 13) River diversion and Intake Structures (Ph.D)

XII) Patent:

- 1- Automatic 3D bed profiler for measuring the bed level in experimental flume, Iranian Ministry of Science research and Technology, INDUSTRIAL PROPERTY GENERAL OFFICE, 2009.
- 2- Manufacturing of saturated soil hydraulic conductivity equipment in hyporheic zone, Iranian Ministry of Science research and Technology, INDUSTRIAL PROPERTY GENERAL OFFICE, 2017.

XIII) Research Project

1. Hydraulic Characteristics of Vertical Drop with Adverse Slope in Downstream Channel, Final Report submitted to Isfahan University of Technology(2001).
2. Sediment Transport at Lateral Intake, Final Report submitted to Islamic Republic of Iran Ministry of Energy, Deputy of Research and Technical Affairs, (2004).
3. Hydraulic Characteristics of Scouring in Downstream of Free overfall, Final Report submitted to Islamic Republic of Iranian Ministry of Energy, Deputy of Research and Technical Affairs (2005).
4. 3D modeling of Flow and sediment transport by SSIIM in Monobe river in Japan. Faculty of Engineering, Ehime University. (2006).
5. River Intake and Sediment Exclusion. Final Report submitted to Islamic Republic of Iranian Ministry of Energy, Deputy of Research and Technical Affairs (2008).
6. Local Scour Guideline. Final Report submitted to Islamic Republic of Iranian Ministry of Energy, Deputy of Research and Technical Affairs (2009).
7. Effective Parameters on scour and sedimentation in Rivers. Final Report submitted to Islamic Republic of Iranian Ministry of Energy, Deputy of Research and Technical Affairs, Golestan Province. (2010).
8. Experimental Investigation of Scouring Around Bottom Outlet in Pressure Flushing. Final Report submitted to khuzestan water and power authority, 2011.
- 9- Use of micromodel for investigation of scouring around L-head groynes. Final Report submitted to Gorgan University of Agricultural Sciences and Natural Resources.2011.
- 10- Optimization of velocity distribution calculation using Genetic Algorithm. Final Report submitted to Gorgan University of Agricultural Sciences and Natural Resources.2012.

- 11- Comparative study of sediment load estimation by different formula for estimation of sediment load (case study: Chehelchai, Narmab, Khormaloo and Gharesoo Rivers). Final Report submitted to Islamic Republic of Iranian Ministry of Energy, Deputy of Research and Technical Affairs, Golestan Province. (2012).
- 12-Numerical simulation of scouring around large bridge piers. Final Report submitted to Gorgan University of Agricultural Sciences and Natural Resources.2013.
- 13-Use of Nano particle for reduction of scouring around bride pier. Final Report submitted to Gorgan University of Agricultural Sciences and Natural Resources.2014.
- 14- River morphology and estimation of lateral migration of rivers (2D simulation of flow and sediment transport). Final Report submitted to Islamic Republic of Iranian Ministry of Energy, Deputy of Research and Technical Affairs, Golestan Province. (2015).
- 15- Applied methods for reduction of erosion in Gorganrod river basin. Final Report submitted to Islamic Republic of Iranian Ministry of Energy, Deputy of Research and Technical Affairs, Golestan Province. (2015).
- 16- Muskingum flood routing model for multiple tributaries of Gorganrod river. . Final Report submitted to Gorgan University of Agricultural Sciences and Natural Resources.2015.
- 17-Effect of gradually varied flow on river morphology of compound channel. . Final Report submitted to Gorgan University of Agricultural Sciences and Natural Resources.2016.
- 18- Temporal and spatial variation of sediment load in Navrood river. Final Report submitted to Islamic Republic of Iranian Ministry of Energy, Deputy of Research and Technical Affairs, Gilan Province. (2018).