CURRICULUM VITAE

Ali Danandeh Mehr
ORCID: 0000-0003-2769-106X
Researcher ID: S-9321-2017
Scopus AI: 55899085700
h-index: 33
Total Number of SCI/SCI-E/ESCI Papers: 76
Date/Place of Birth: 08.09.1979 / Tabriz, Iran

Civil Engineering Department,
Faculty of Engineering, Antalya Bilim University, Antalya, Turkey.
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Education

2012 – 2016   **Ph.D.**
                 Istanbul Technical University, Istanbul, Turkey.
                 Major Field: Civil Eng. Minor Field: Hydraulics and Water Resources.
                 Title of the thesis: *Climate change impacts on catchment-scale extreme rainfall variability*

2002 – 2005   **M.Sc.**
                 Power and Water University of Technology, Tehran, Iran
                 Major Field: Civil Engineering   Minor Field: River Engineering
                 Title of the thesis: *Optimization of Flood Control Structures in Urban Catchments*

1997 – 2001   **B.Sc.**
                 Islamic Azad University – Tabriz Branch (www.iaut.ac.ir) – Tabriz, Iran
                 Major Field: Civil Engineering

Academic/Work Experience

04.10.2019 –   **Associate Professor**, Civil Engineering Department,
                  Faculty of Engineering, Antalya Bilim University, Antalya, Turkey.
                  Approved by Presidency of the inter-university board, Republic of Turkey on 29.04.2019.

2021 (Aug.)   **Postdoctoral Researcher**, Water, Energy and Environmental Research Unit
 –2022 (Jul.)   University of Oulu, Oulu, Finland

2017 (Sept.)   **Assistant Professor**, Civil Engineering Department,
–2019 (Sept.)   Faculty of Engineering, Antalya Bilim University, Antalya, Turkey.

2016 (Jul.)   **Postdoctoral Research Fellow**, Water Resources Engineering Department
 –2017 (Jul.)   Faculty of Civil Engineering, University of Tabriz, Tabriz, Iran.

2017 – 2017   **Guest Lecturer**, Civil Engineering Department
                  Near East University, Nicosia, North Cyprus.

2016 – 2016   **Guest Lecturer**, Civil Engineering Department
                  Eastern Mediterranean University, Famagusta, North Cyprus.

2014 – 2016   **Research Assistant**, Marine Engineering Department
                  Istanbul Technical University, North Cyprus Education and Research Campuses,
                  Famagusta, North Cyprus.

2009 – 2011   **Senior Expert**, Bureau of Rivers & Coastal Engineering
                   Iran Water Resources Management Company. (www.wrm.ir) Tehran, Iran.

Consulting Experience

2007 – 2009   **Sangab Zagros Consulting Engineering Co.**, Shiraz, Iran
                   Hydrological and hydraulic studies of river training projects

2004 – 2007   **Ab Pouyeshgaran Novin Consulting Engineering Co.**, Tehran, Iran
                   Hydrologic and hydraulic studies for river training projects

2002 – 2004   **Tarh-e No Andishan Consulting Engineering Co.**, (www.tna.ir). Tehran, Iran
                    Hydrological and hydraulic design of bridges/culverts

Awards/honors

2022   Hydrological Science Journal Reviewer Award (IAHS with the support of Tailor and Francis)

2019-2022   Top 2% Scientist in the field of Engineering (Elsevier and Stanford University Selection)

2019   Best oral presentation award (The 1st International and 4th National Congress on Iranian Irrigation
                  and Drainage, 13-14 November 2019, Urmia University, Iran)

2019-2022   Top Researcher Award (Antalya Bilim University)

2018   Top Researcher Award (Antalya Bilim University)

2017   Young Researcher Award (Near East University)

2017   Publons Peer Review Awards (One of top one percent peer reviewers)

2016   Best Ph.D. Thesis Award, Istanbul Technical University

Languages

English: Fluent   **Turkish:** Fluent   **Farsi:** Fluent   **Azerbaijani:** Mother tongue

Professional Software Application Experience

- HEC Series (HMS, RAS, SSP, DSSvu)
- WMS (Watershed Modeling System)
- MATLAB (Matrix Laboratory)
- Arc GIS/QGIS
- Panoply/NCview
- Discipulus/Gene-Xpro-Tools/GPTIPS/GPdotNet (Genetic Programming Tools)

Editorial board membership

- Journal of Civil and Environmental Engineering (University of Tabriz: Editorial Board: Since 2020)
- Advance Research in Civil Engineering (Editorial Board: Sine 2019)
- Frontiers in Environmental Sciences (Associate Editor Since 2022)
- AQUA, IWA Publishing, London, UK. (Guest Editor, 2023)

Technical Program Committee Member

- Special Session Chair: 7th International Conference on Control, Instrumentation and Automation (ICCIA), Tabriz, Iran.
- *Keynote speaker and International Program Committee*: 12th International Scientific Conference on Production Engineering (Development and Modernization of Production) September 2019, Sarajevo, Bosnia and Herzegovina
- Special Session Chair: Intelligence and Fuzzy Systems (INFUS 2019), Istanbul, Turkey.
- *Session Chair*: International Water and Environment Congress (SUÇEV 2018), March 22-24, Bursa, Turkey.
- *Organizing/Executive committee:* Joint Workshop-cum-Seminar on Soft Computing Methods in Water Resources Engineering. Nicosia, North Cyprus. November 29, 2016.
- *International Program Committee:* 9th International Conference on Theory and Application of Soft Computing, Computing with Words and Perception, ICSCCW 2017, 22-23 August 2017, Budapest, Hungary
- *International Program Committee:* 13th International Conference on Applications of Fuzzy Systems and Soft Computing, ICAFTS 2018, 27-28 August 2018, Warsaw, Poland.

List of Publications

SCI/SCI-E/ESCI Journals:

76. Modaresi, F., Danandeh Mehr, A. (2024). *A novel approach to predictor selection among large-scale climate indices for seasonal rainfall forecasting in small catchments*. Hydrological Sciences Journal, 1-25.

75. Fathian, F., Dehghan, Z., Alee, M. M., Vaheddoost, B., Abualigah, L., & Danandeh Mehr, A. (2023). *Regional classification of extreme droughts across Iran*. Acta Geophysica, 1-25.

74. Salamttalab, M. M., Parmas, B., Mustafa Alee, H., Hooshyaripor, F., Danandeh Mehr, A., Vosoughifar, H., ... & Noori, R. (2023). *A Finite Volume Method for a 2D Dam-Break Simulation on a Wet Bed Using a Modified HLLC Scheme*. Water, *15*(21), 3841.

73. Partani, S., Danandeh Mehr, A., Maghrebi, M., Mokhtari, R., Nachtnebel, H. P., Taniwaki, R. H., & Arzhangi, A. (2023). *A new spatial estimation model and source apportionment of aliphatic hydrocarbons in coastal surface sediments of the Nayband Bay, Persian Gulf*. Science of The Total Environment, 166746.

72. Darabi, H., Danandeh Mehr, A., Kum, G., Sönmez, M. E., Dumitrache, C. A., Diani, K., ... & Torabi Haghighi, A. (2023). Hydroclimatic Trends and Drought Risk Assessment in the Ceyhan River Basin: Insights from SPI and STI Indices. *Hydrology*, 10(8), 157.

71. Soylu Pekpostalci, D, Tur, R., Danandeh Mehr, A. (2023) *Spatiotemporal Variations of Meteorological Drought across Mediterranean Region of Türkiye*. Pure and Applied Geophysics, (accepted).

70. Haghighi, A. T., Akbari, M., Noori, R., Danandeh Mehr, A., Gohari, A., Sönmez, M. E., ... & Kløve, B. (2023). *The impact of Turkey's water resources development on the flow regime of the Tigris River in Iraq*. Journal of Hydrology: Regional Studies, *48*, 101454.

69. Danandeh Mehr, A. (2023). *A Gene-Random Forest Model for Meteorological Drought Prediction*. Pure and Applied Geophysics, 1-11.

68. Mustafa Alee, M., Danandeh Mehr, A., Akdegirmen, O., & Nourani, V. (2023). *Drought Assessment across Erbil Using Satellite Products*. Sustainability, 15(8), 6687.

67. Soylu Pekpostalci, D, Tur, R., Danandeh Mehr, A., Vazifekhah Ghaffari, M.A., Dąbrowska, D., Nourani, V. (2023) *Drought Monitoring and Forecasting across Turkey: A Contemporary Review*. Sustainability 2023, 15, 6080. https://doi.org/10.3390/su15076080

66. Danandeh Mehr, A., Marttila, H., Torabi Haghighi, A. T., Croghan, D., & Fatollahzadeh Attar, N. (2023). *GTAR: a new ensemble evolutionary autoregressive approach to model dissolved organic carbon.* Journal of Water Supply: Research and Technology-Aqua. doi: 10.2166/aqua.2023.235

65. Danandeh Mehr, A., Tur, R., Alee, M. M., Gul, E., Nourani, V., Shoaei, S., & Mohammadi, B. (2023). *Optimizing Extreme Learning Machine for Drought Forecasting: Water Cycle vs. Bacterial Foraging.* Sustainability, 15(5), 3923.

64. Maghrebi, M., Noori, R., Danandeh Mehr, A., Lak, R., Darougheh, F., Razmgir, R., ... & Kløve, B. (2023). *Spatiotemporal Changes in Iranian Rivers' Discharge*. Elementa Science of the Anthropocene, 11(1), 00002.

63. Gholizadeh, R., Yılmaz, H., & Danandeh Mehr, A. (2023). *A new binary genetic programming approach to design public transportation systems according to transit-oriented development criteria*. Scientia Iranica, 30 (3), 936-951.

62. Hisam, E., Danandeh Mehr, A., Alganci, U., & Seker, D. Z. (2023). *Comprehensive evaluation of Satellite-Based and reanalysis precipitation products over the Mediterranean region in Turkey*. Advances in Space Research, 71(7), 3005-3021.

61. Maghrebi, M., Danandeh Mehr, A., Karrabi, S. M., Sadegh, M., Partani, S., Ghiasi, B., & Nourani, V. (2022). *Spatiotemporal Variations of Air Pollution during the COVID-19 Pandemic across Tehran, Iran: Commonalities with and Differences from Global Trends*. Sustainability, 14(23), 16313.

60. Heddam, S., Kim, S., Danandeh Mehr, A., Zounemat-Kermani, M., Ptak, M., Elbeltagi, A., ... & Tikhamarine, Y. (2022). *Bat algorithm optimized extreme learning machine (Bat-ELM): A novel approach for daily river water temperature modelling* (2022) The Geographical Journal.; 00:1–12. https://doi.org/10.1111/geoj.12478

59. Danandeh Mehr, A., Erkinaro, J., Hjort, J., Haghighi, A. T., Ahrari, A., Korpisaari, M., ... & Marttila, H. (2022). *Factors affecting the presence of Arctic charr in streams based on a jittered binary genetic programming model*. Ecological Indicators, 142, 109203.

58. Rosbjerg, D., Engeland, K., Førland, E., Haghighi, A. T., Mehr, A. D., & Olsson, J. (2022). *Nordic contributions to stochastic methods in hydrology*. Hydrology Research, 53 (6): 840–866.

57. Tao, H., Hameed, M. M., Marhoon, H. A., Zounemat-Kermani, M., Salim, H., Sungwon, K., ... & Yaseen, Z. M. (2022). *Groundwater Level Prediction using Machine Learning Models: A Comprehensive Review*. Neurocomputing, 489, 271-308.

56. Gholizadeh, R., Yılmaz, H., & Danandeh Mehr, A. (2022). *Multitemporal meteorological drought forecasting using Bat-ELM*. Acta Geophysica, 70(2), 917-927.

55. Danandeh Mehr, A., Torabi Haghighi, A., Jabarnejad, M., Safari, M.J.S., Nourani, V. (2022). *A new evolutionary hybrid random forest model for SPEI Forecasting.* Water *14*, 755. https://doi.org/10.3390/w14050755

54. Danandeh Mehr, A., Ghadimi, S., Marttila, H., & Torabi Haghighi, A. (2022). *A new evolutionary time series model for streamflow forecasting in boreal lake-river systems*. Theoretical and Applied Climatology, 1-14.

53. Danandeh Mehr, A., Rikhtehgar Ghiasi, A., Yaseen, Z. M., Sorman, A. U., & Abualigah, L. (2022). *A novel intelligent deep learning predictive model for meteorological drought forecasting*. Journal of Ambient Intelligence and Humanized Computing, 1-15.

52. Tur, R., Tas, E., Torabi Haghighi, & A., Danandeh Mehr, A., (2021). *Sea Level Prediction Using Machine Learning*. Water 13, 3566. https://doi.org/10.3390/w13243566

51. Gul, E., Safari, M. J. S., Torabi Haghighi, A., Danandeh Mehr, A., (2021). *Sediment transport modeling in nondeposition with clean bed condition using different tree-based algorithms*. PLoS ONE 16(10): e0258125. https://doi.org/10.1371/journal.pone.0258125

50. Danandeh Mehr, A., & Fathollahzadeh Attar, N. (2021). *A gradient boosting tree approach for SPEI*

classification and prediction in Turkey. Hydrological Sciences Journal, Doi: 10.1080/02626667.2021.1962884

49. Rahimzad, M., Moghaddam Nia, A., Zolfonoon, H., Soltani, J., Danandeh Mehr, A., & Kwon, H. H. (2021). *Performance Comparison of an LSTM-based Deep Learning Model versus Conventional Machine Learning Algorithms for Streamflow Forecasting*. Water Resources Management 35(12), 4167-4187.

48. Danandeh Mehr, A., Hrnjica, B., Bonacci, Torabi Haghighi, A. (2021) *Innovative and successive average trend analysis of temperature and precipitation in Osijek, Croatia*. Theoretical and Applied Climatology 145, pages875–890.

47. Danandeh Mehr, A. (2021). *Drought classification using gradient boosting decision tree*. Acta Geophysica, 69, 909 – 918.

46. Danandeh Mehr A., Gandomi, A.H. (2021). *MSGP-LASSO: an improved multi-stage genetic programming model for streamflow prediction*. Information Sciences, 561, 181-195.

45. Danandeh Mehr A., Safari, M. J. S., Nourani V. (2021). *Wavelet packet-genetic programming: a new model for meteorological drought forecasting*. Teknik Dergi, 32 (4), 11029 – 11050.

44. Alizamir, M., Heddam, S., Kim, S., & Danandeh Mehr, A. (2020). *On the implementation of a novel data-intelligence model based on extreme learning machine optimized by bat algorithm for estimating daily chlorophyll-a concentration: case studies of river and lake in USA*. Journal of Cleaner Production, 124868.

43. Modabberi, A., Noori, R., Madani, K., Ehsani, A.H., Danandeh Mehr, A., Hooshyaripor, F., & Kløve B. (2020) *Caspian Sea is eutrophying: The alarming message of satellite data.* Environmental Research Letters, 15, 124047.

42. Danandeh Mehr A., Tur R., Çalışkan C., & Tas E. (2020). *A novel fuzzy random forest model for meteorological drought classification and prediction in ungauged catchments.* Pure and Applied Geophysics, 177, 5993–6006.

41. Danandeh Mehr A., Vaheddoost, B., & Mohammadi, B. (2020). ENN-SA: A novel neuro-annealing model for multi-station drought prediction. Computers & Geosciences, 145, 104622

40. Danandeh Mehr A. (2020). *Seasonal rainfall hindcasting using ensemble multi-stage genetic programming.* Theoretical and Applied Climatology. 143(1), 461-472

39. Danandeh Mehr A. (2020). *An ensemble genetic programming model for seasonal precipitation forecasting.* SN Applied Science 2:1821. https://doi.org/10.1007/s42452-020-03625-x

38. Mohammadi, B., Vaheddoost, B., & Danandeh Mehr A. (2020). *A spatiotemporal teleconnection study between Peruvian precipitation and oceanic oscillations*. Quaternary International., https://doi.org/10.1016/j.quaint.2020.09.042

37. Maghrebi, M., Noori, R., Bhattarai, R., Mundher Yaseen, Z., Tang, Q., Al-Ansari, N., Danandeh Mehr A., ... & Torabi Haghighi, A. (2020). *Iran's Agriculture in the Anthropocene*. Earth's Future, 8(9), e2020EF001547.

36. Danandeh Mehr A., Tas, E., Kahya E. (2020). *Risk assessment of fuel supply pipelines: The Kalecik Power Plant Case Study.* Journal of Pipeline Systems - Engineering and Practice. 11(4): 05020005.

35. Rahmani-Rezaeieh A., Mohammadi, M., Danandeh Mehr A. (2020). *Climate change impacts on floodway and floodway fringe: a case study in Shahrchay River Basin, Iran*. Arabian Journal of Geosciences. 13:12 (494). https://doi.org/10.1007/s12517-020-05444-1

34. Afshar, M.H., Şorman, A., Tosunoğlu, F. Bulut B., Yilmaz M.T., Danandeh Mehr A. (2020). *Climate change impact assessment on mild and extreme drought events using copulas over Ankara, Turkey*. Theoretical and Applied Climatology, 141(3-4)1045-1055.

33. Mehdizadeh, S., Ahmadi F., Danandeh Mehr A., Safari, M. J. S. (2020). *Drought modeling using classic time series and hybrid wavelet-gene expression programming models*. Journal of Hydrology, 587, 125017.

32. Safari, M. J. S., Rahimzadeh Arashloo, S., Danandeh Mehr A., (2020). *Rainfall-runoff modeling through regression in the reproducing kernel Hilbert space algorithm*. Journal of Hydrology, 587, 125014.

31. Sheikh Khozani, Z., Safari, M. J. S., Danandeh Mehr, A., & Wan Mohtar, W. H. M. (2020). *An ensemble genetic programming approach to develop incipient sediment motion models in rectangular channels*. Journal of Hydrology, 584, 124753.

30. Danandeh Mehr A., Safari, M. J. S., (2020). *Multiple genetic programming: a new methodology to improve genetic-based explicit monthly rainfall models*. Environmental Modeling and Assessment, 192:25.

29. Danandeh Mehr A., Bagheri, F., Safari, M. J. S., (2020). *Electrical energy demand prediction: a comparison between genetic programming and decision tree*. Gazi University Journal of Science, 33(1), 62-72.

28. Ebtehaj, I., Bonakdari, H., Safari, M. J. S., Gharabaghi, B., Zaji, A. H., Madavar, H. R., ... & Danandeh Mehr, A. (2020). *Combination of sensitivity and uncertainty analyses for sediment transport modeling in sewer pipes*. International Journal of Sediment Research, 35 (2), 157-170.

27. Danandeh Mehr, A., Vaheddoost, B. (2020). *Identification of the trends associated with the SPI and SPEI indices in Ankara, Turkey*. Theoretical and Applied Climatology, 139(3-4), 1531-1542.

26. Danandeh Mehr A., Safari, M. J. S., (2020). *Application of soft computing techniques for particle Froude number estimation in sewer pipes*. Journal of Pipeline Systems - Engineering and Practice 11(2): 04020002.

25. Rahmani-Rezaeieh A, Mohammadi, M., Danandeh Mehr A. (2020). *Ensemble gene expression programming: a new approach for evolution of parsimonious streamflow forecasting model.* Theoretical and Applied Climatology, 139 (1-2), 549-564.

24. Danandeh Mehr A., Sorman, A.U., Kahya E., Hesami Afshar, M. (2020). *Climate change impacts on meteorological drought using SPI and SPEI: case study of Ankara, Turkey*. Hydrological Sciences Journal 65(2), 254-268.

23. Hrnjica, B., Danandeh Mehr, A. Behrem, Š., and Ağıralioğlu N. (2019). Genetic Programming for Turbidity Prediction: Hourly and Monthly Scenarios. Pamukkale University Journal of Engineering Sciences, 25 (8), 992-997.

22. Nourani, V., Ghasemzade M., Danandeh Mehr, A., and Sharghi E. (2019). *Investigating the effect of hydroclimatological variables on Urmia Lake water level using wavelet coherence measure*. Journal of Water and Climate Change, 10(1), 13-29.

21. Danandeh Mehr, A., Jabarnejad, M., and Nourani, V. (2019). *Pareto-optimal MPSA-MGGP: a new gene-annealing model for monthly rainfall forecasting*. Journal of Hydrology, 571, 406-415.

20. Danandeh Mehr, Nourani, V., Karimi Khosroshahi V., and Ghorbani, M.A. (2019). *A hybrid support vector regression–firefly model for monthly rainfall forecasting*. International Journal of Environmental Science and Technology, 16, 335–346.

19. Danandeh Mehr A., Nourani, V., Kahya E., Hrnjica B., Sattar, AMA., Yaseen ZM. (2018). *Genetic programming in water resources engineering: A state-of the-art review*. Journal of Hydrology, 566, 643-667.

18. Danandeh Mehr A. (2018). *An improved gene expression programming model for streamflow forecasting in intermittent streams*. Journal of Hydrology, 563, 669-678.

17. Ghorbani M. A., Khatibi R., Danandeh Mehr A., Asadi H. (2018). *Chaos-based multigene genetic programming: a new hybrid strategy for river flow forecasting*. Journal of Hydrology, 562, 455-467.

16. Safari, M. J. S., and Danandeh Mehr A. (2018). *Multigene genetic programming for sediment transport modeling in sewers at non-deposition with deposited bed condition.* International journal of sediment research 33, 262–270

15. Danandeh Mehr, A., Nourani, V. (2018). *Season algorithm-multigene genetic programming: A new approach for rainfall-runoff modelling.* Water Resources Management, 32 (8), 2665-2679.

14. Nourani, V., Danandeh Mehr, A., Azad, N. (2018). *Trend analysis of hydroclimatological variables in Urmia Lake basin using hybrid wavelet Mann–Kendall and Şen tests.* Environmental Earth Sciences, 77 (5), 207.

13. Olyaie, E. Zare Abyaneh, H., Danandeh Mehr, A. (2017). *A comparative analysis among computational intelligence techniques for dissolved oxygen prediction in Delaware River.* Geoscience Frontiers 8, 517-527.

12. Danandeh Mehr, A. Nourani, V., Hrnjica B., Molajou A. (2017). *A binary genetic programing model for teleconnection identification between global sea surface temperature and local maximum monthly rainfall events.* Journal of Hydrology, 555, 397-506.

11. Yaseen, Z. M., Ebtehaj, I., Bonakdari, H., Deo, R. C., Danandeh Mehr, A., Mohtar, W. H. M. W., ... & Singh, V. P. (2017). *Novel approach for streamflow forecasting using a hybrid ANFIS-FFA model.* Journal of Hydrology, 554, 263-276.

10. Danandeh Mehr, A., Kahya, E. (2017). *A Pareto-optimal moving average multigene genetic programming model for daily streamflow prediction.* Journal of Hydrology, 549, 603-615.

9. Danandeh Mehr, A. and Nourani, V. (2017). *A Pareto-optimal moving average-multigene genetic programming model for rainfall-runoff modelling.* Environmental Modelling and Software, 92: 239-251.

8. Danandeh Mehr, A. and Kahya, E. (2017). *Climate change impacts on catchment-scale extreme rainfall variability: Case Study of Rize Province, Turkey.* Journal of Hydrologic Engineering, 22(3), 05016037, 10.1061/(ASCE)HE.1943-5584.0001477.

7. Danandeh Mehr, A. and Kahya, E. (2017). *Grid-based performance evaluation of GCM-RCM combinations for rainfall reproduction.* Theoretical and Applied Climatology 129 (1): 47-57.

6. Danandeh Mehr, A., Kahya E., Şahin, A. and Nazemosadat M.J. (2015) *Successive-station monthly streamflow prediction using different ANN algorithms.* International Journal of Environmental Science and Technology, 12 (7): 2191-2200.

5. Danandeh Mehr, A., Kahya, E. and Özger M. (2014). *A gene-wavelet model for long lead-time drought forecasting.* Journal of Hydrology 517, 691-699.

4. Danandeh Mehr, A., Kahya, E. and Yerdelen, C. (2014). *Linear genetic programming application for successive-station monthly streamflow prediction.* Computers & Geosciences 70, 63-72.

3. Uyumaz, A., Danandeh Mehr A., Kahya E., and Erdem H. (2014) *Rectangular side weirs discharge coefficient estimation in circular channels using linear genetic programming approach.* Journal of Hydroinformatics 16 (6), 1318-1330.

2. Danandeh Mehr, A., Kahya, E., Bagheri, F., Deliktas E. (2014) *Successive-station monthly streamflow prediction using neuro-wavelet technique.* Earth Science Informatics 7, 217-229.

1. Danandeh Mehr, A., Kahya E., Olyaie E. (2013) *Streamflow prediction using linear genetic programming in comparison with a neuro-wavelet technique.* Journal of Hydrology, 505:240–249.

Other peer-reviewed journal papers:

6. Danandeh Mehr, A. and Akdegirmen, O. (2021). *Estimation of Urban Imperviousness and its Impacts on Flashfloods in Gazipaşa, Turkey*. Knowledge-Based Engineering and Sciences, 2(1), 9-17.

5. Tas, E., Agiralioglu, N., Danandeh Mehr, A., Tur, R. (2020). *Energy Loss Investigation in Submarine Pipelines: Case Study of Cyprus Water Supply Project*. Advance Researches in Civil Engineering, 2(2), 31-44. doi: 10.30469/arce.2020.108582

4. Karimi, B., Safari, M.J.S, Danandeh Mehr, A. and Mohammadi, M.A. (2019). *Monthly rainfall prediction using ARIMA and gene expression programming: a case study in Urmia, Iran.* Online Journal of Engineering Sciences and Technologies. 2(3), 8-14.

3. Danandeh Mehr, A. and Şorman, A.Ü. (2018). *Streamflow and sediment load prediction using linear genetic programming.* Uludağ University Journal of the Faculty of Engineering 23(2), 323-332.

2. Danandeh Mehr, A. (2018). *Month ahead rainfall forecasting using gene expression programming.* American Journal of Earth and Environmental Sciences 1(2), 63-70.

1. Danandeh Mehr, A. and Demirel, M.C. (2016). *On the calibration of multi-gene genetic programming to simulate low flows in the Moselle River.* Uludağ University Journal of the Faculty of Engineering 21 (2), 365-376.

Books:

7. Hrnjica, B. & A. Danandeh Mehr. 2019. "*Optimized Genetic Programming Applications: Emerging Research and Opportunities*". (pp. 1-310). Hershey, PA: IGI Global. doi: 10.4018/978-1-5225-6005-0

6. Nourani, V. & A. Danandeh Mehr. 2011. "*Advanced Mathematics for Civil Engineers*". Javedankherad Publishers, ISBN 978 964 6030 75 6. (in Farsi)

5. Niksefat, GH. R. & A. Danandeh Mehr. 2010. "*Principles of River Engineering*". Tehran Dibagran artistic and cultural institute, ISBN 978 964 354 996 1. (in Farsi)

4. Danandeh Mehr. A. 2011. "*Hydraulics*". Tehran Dibagran artistic and cultural institute, First edition 2008. ISBN 978 964 354 924 4. (Republished in 2014) (in Farsi)

3. Danandeh Mehr. A. 2005, "*Mechanics of Fluids and Open Channel Hydraulics (Test Book)"*. Published by Tehran Dibagran artistic and cultural institute, 2005, ISBN 964 354 631 4. (in Farsi)

2. Mousavi Nadushani. S. and A. Danandeh Mehr "*Hydrologic Modeling System (HEC-HMS)*". 2005, published by Tehran Dibagran artistic and cultural institute, 2005, ISBN 964 354 554 7. (in Farsi)

1. Vafaipoor, R. & A. Danandeh Mehr. 2003, "*Fluid Mechanics–Teaching and Testing*". Published by Elmiran, 2003, ISBN 964 6531 30 X. (Republished in 2005, 2006 and 2008) (in Farsi).

Book Chapter:

6. Salim Heddam, Sungwon Kim, Ali Danandeh Mehr, Mohammad Zounemat-Kermani, Anurag Malik, Ahmed Elbeltagi, Ozgur Kisi, (2022) Chapter 1 - Predicting dissolved oxygen concentration in river using new advanced machines learning: Long-short term memory (LSTM) deep learning, Editor(s): Hamid Reza Pourghasemi, Computers in Earth and Environmental Sciences, Elsevier.

5. Danandeh Mehr, Ali; Safari, M.J.S. (2021). Genetic programming for streamflow forecasting: A concise review of univariate models with a case Study. In Advances in Streamflow Forecasting: from Traditional to Modern Approaches, Eds.: Priyanka Sharma, Deepesh Maciwal, Elsevier, vol:1, 450, pages. ISBN:978-0128206737.

4. Safari, M.J.S, and Danandeh Mehr, A. (2020). Design of smart urban drainage systems using evolutionary

decision tree model. In IoT Technologies in Smart-Cities: From sensors to big data, security, and trust (1st Edition). 131, IET.

3. Tur, R. Uzunsakal L, Danandeh Mehr, A. (2020). Coastline change determination using UAV technology: A case study along Konyaaltı coast, Antalya, Turkey. In Drones in Smart-Cities, Security and Performance (1st Edition). (pp. 123-140). Elsevier

2. Hrnjica, B., & Danandeh Mehr, A. (2019). Energy Demand Forecasting Using Deep Learning. In Smart Cities, Performability, Cognition, & Security (pp. 71-103). Springer, Nature Switzerland AG.

1. Nourani, V., Molajou, A., Najafi, H., & Danandeh Mehr, A. (2019). Emotional ANN (EANN): A New Generation of Neural Networks for Hydrological Modeling in IoT. In Artificial Intelligence in IoT (pp. 45-61). Springer, Cham.

ISC Journals (Text in Farsi):

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8. Danandehmehr, A. 2007, "HEC-HMS Application on Kor River Floods Routing on Mollasadra Dam". Proceedings of 1st hydraulic models in water engineering conference, Islamic Azad University, Marvdasht branch, Marvdasht, Iran, 2007

7. Jahangir, I., and A. Danandehmehr 2007 "Flood Damage Predicting before Flood Event". Invited speaker, Runoff, and urban floods management workshop. Shiraz, Iran. 16th-17th Oct.

6. Danandeh Mehr, A., M. M. Vanolia and M. R. M. Tabatabai. 2006. "Benefit-cost Analysis Was Applied to Provide an Explicit Economical Basis for Developing Integrated Floodplain Management Plans" Proceedings of 2nd International Conference on Hydrology and Watershed Management, JNTU, Hyderabad, INDIA 5th – 8th Des.

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4. Danandehmehr, A. Shishegar, M., and E. Malekabbaslou. 2005. "Application of HEC-HMS in Flood Control of Tabriz River". Proceedings of 12th student's conference on civil engineering, Iran University of Science and Technology, Tehran, Iran, 21st - 23rd Dec.

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Research interests

- Surface Water Hydrology and Rainfall-Runoff modeling
- Statistical Hydrology and Hydroinformatics
- Natural Hazards, River Basin Modeling, and Flood/Drought Forecasting
- Regional-Scale Climate Change Impacts Assessment
- Water, Energy, and Food Nexus
- Machine Learning Methods

Courses taught over the past five years.

- B.Sc.: Water Recourses Engineering, Case studies in Civil Engineering, Environmental Engineering, Fluid Mechanics, Hydraulics Engineering, Hydrology

- M.Sc.: Soft computing in Civil Engineering, Advanced Hydrology, River Engineering, Scientific Research Techniques and Ethics.
- Ph.D.: Special Topics in Hydrology

Advised M.Sc. and Ph.D. Thesis

M.Sc.
- Enes Hişam, 2022 (Istanbul Technical University), Performance assessment of satellite-based rainfall products over Akdeniz Basin <co-advisor>
- Erkin TAS, 2021 (Akdeniz University), Prediction of sea level changes using meteorological factors <co-advisor>
- Esma KALE, 2021 (Antalya Bilim University), Drought forecasting using decision tree. <co-advisor>
- Bahareh Karimi, 2018, (University College of Science and Technology), Monthly rainfall prediction using standard and gene-expression programming and comparing with ARIMA model < co-advisor >
- Saeed Abutalebi, 2018, (University College of Science and Technology), Monthly rainfall prediction using standard and multi-gene genetic programming and comparing with ARIMA model < co-advisor >
- Yunes Musavi, 2018, (University College of Science and Technology), Monthly rainfall prediction using standard and linear genetic programming and comparing with ARIMA model < co-advisor >

Ph.D.
- Aidin Rahmani -Rezaeieh (Islamic Azad University, Iran), Climate changes impact on floodway: a case study on Shahrchi River < 2021, co-advisor >
- Dilayda Soylu (Akdeniz University, Turkey), Climate changes impact on drought across Akdeniz Basin, Turkey < co-advisor – in progress>