CURRICULUM VITAE

Ali Danandeh Mehr
ORCID: 0000-0003-2769-106X
Researcher ID: S-9321-2017
Scopus AI: 55899085700
h-index: 42 (google scholar); 37 (Scopus)
Total Number of SCI/SCI-E/ESCI Papers: 108

Civil Engineering Department,
Faculty of Engineering and Natural Sciences, Antalya Bilim University, Antalya, Turkey.
E-mail: ali.danandeh@antalya.edu.tr

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

2024 (Oct.) – **Professor**, Civil Engineering Department,
Faculty of Engineering, Antalya Bilim University, Antalya, Turkey.

2019 (Apr.) –2024 (Sept.) **Associate Professor**, Civil Engineering Department,
Faculty of Engineering, Antalya Bilim University, Antalya, Turkey.
Approved by Presidency of the Inter-University Board, Republic of Turkey (29.04.2019)

2022 (Aug.) –2023 (Jul.) **Visiting Scholar**, Centre of Excellence in Hydroinformatics, Faculty of Civil Engineering, University of Tabriz, Tabriz, Iran

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

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

2016 (Jul.) –2017 (Jul.) **Postdoctoral Research Fellow**, Water Resources Engineering Department
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

2017 – 2025 **RTR Engineering and Consulting Co.**, Antalya, Turkey
Hydrology and water resources engineering expert

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

2025 Top 0.05% of scholars in the specific fields of Drought (the World Highly Ranked Scholars 2025, reported by ScholarGPS™)

2022 Top 1% of scholars in the specific fields of genetic programming, forecasting, and programming models (the World Highly Ranked Scholars 2022, reported by ScholarGPS™)

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

2019-2024 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)

2018-2023 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, **Arabic:** Beginner

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)/RapidMiner

Editorial board membership

- Associate Editor, Journal of Hydrology (Elsevier)
- Associate Editor, Hydrological Science Journal (IAHS)
- Associate Editor, Discover Water (Springer)
- Associate Editor, J. Civil. Env. Eng. (Tabriz University)
- Associate Editor, J. Ecohydrology (University of Tehran)
- AQUA, IWA Publishing, London, UK. (Guest Editor, 2023-2024)
- Water, MDPI (Guest Editor, 2022-2023)

Technical Program Committee Member/Invited Speaker

- *Plenary Keynote Speaker*: 7th International Conference on Modeling & Simulation in Civil Engineering - Focusing on global partnership for sustainable development and circular economy through technology, infrastructure and research 5th - 7th Dec 2024 (ICMSC 2024), TKM College of Engineering, **Kollam**, India
- *Plenary Keynote Speaker*: International Conference on Engineering and Technologies for Sustainable Development (ICETSD 2024). 28th August 2024, INTI International University, **Nilai**, Negeri Sembilan, Malaysia.
- *Invited speaker*: The blet and road workshop on water resources, May 28, 2024, Nanjing University, **Nanjing,** China
- *Invited speaker*: 1st National Conference on Application of New Technologies in Civil Engineering, May 15, 2024, Islamic Azad University, **Tabriz**, Iran
- 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.
- *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:

108. Arzhangi, A., Partani, S., Danandeh Mehr, A., Ezzati, F., & Saber, A. (2026). Instant water quality index prediction via reaeration process and hydraulic parameters in the river system. *Communications Sustainability*, *1*(1), 24.

107. Niaz, R., Raza, M. A., Ali, Z., Ahmed, A. T., Safari, M. J. S., & Danandeh Mehr, A. (2025). Assessing Seasonal Drought Persistence using a Bayesian Logistic Regression Approach. *Physics and Chemistry of the Earth, Parts A/B/C*, 104253.

106. Danandeh Mehr, A., Ajith, A., Sankaran, A., Maghrebi, M., Tur, R., Saji, A. S., Nizar, A., & Pottayil, M. N. (2025). A Time-Dependent Intrinsic Correlation Analysis to Identify Teleconnection Between Climatic Oscillations and Extreme Climatic Indices Across the Southern Indian Peninsula. *Atmosphere*, *16*(12), 1395. https://doi.org/10.3390/atmos16121395

105. Ilyas, M., Niaz, R., Cheng, H., Di Persio, L., Abd Elwahab, M. E., Danandeh Mehr, A., & Hussain, I. (2025). Modeling meteorological drought across scales with regional and global climate indicators. *Theoretical and Applied Climatology*, *156*(12), 1-26.

104. Niaz, R., Munir, S., Raza, M. A., Tur, R., Partani, S., & Mehr, A. D. (2025). BAMPP: A Novel Bayesian Network Enhanced by Average Marginal Posterior Probabilities to Identify Critical Ground Truth Meteorological Stations for Drought Monitoring. *Physics and Chemistry of the Earth, Parts A/B/C*, 104215.

103. Salim, S. A., M, K., S, A., Danandeh Mehr, A., & Alex, M. K. (2025). A novel random forest model enhanced by multivariate empirical mode decomposition for daily soil moisture prediction across India. *Environmental Earth Sciences*, *84*(23), 693.

102. Lee, S., Danandeh Mehr, A., Moriasi, D., & Mirchi, A. (2025). Large-Scale Drought Forecasting in the US Southern Plains Through a Hybrid Cluster-Based Wavelet-Machine Learning Approach. *Water Resources Research*, *61*(11), e2024WR039744.

101. Danandeh Mehr, A., & Moghaddam Nia, A. (2025). Emerging machine learning and optimization techniques in urban water systems. *AQUA—Water Infrastructure, Ecosystems and Society*, jws2025202.

100. Luo, L., Ke, C. Q., Cai, Y., Li, H., Xiao, Y., Nourani, V., Danandeh Mehr, A., & Sankaran, A. (2025). Abrupt decline and subsequent recovery of extreme precipitation associated with Atmospheric Rivers in the Southeastern Tibetan Plateau. Atmospheric Research, 108461.

99. Modaresi, F., Danandeh Mehr, A., Bajgiran, I. S., & Safari, M. J. S. (2025). Multi-level trend analysis of extreme climate indices by a novel hybrid method of fuzzy logic and innovative trend analysis. *Scientific Reports*, *15*(1), 27432.

98. Mert, I.S., Danandeh Mehr, A., Abulaligah, L. (2025). The management genetic code: courageous dimensions, morality and evolutionary satisfaction. *Management Decision*, 63.

97. Danandeh Mehr, A., Ghavifekr, A. A., Ghazaei, E., Safari, M. J. S., Ke, C. Q., & Nourani, V. (2025). S-Transformer: a new deep learning model enhanced by sequential transformer encoders for drought forecasting. *Earth Science Informatics*, 18(2), 341.

96. Alkubaisi, H., Danandeh Mehr, A., S, A., & Khan, M. M. H. (2025). Drought modelling and forecasting using shallow and deep machine learning techniques. *Modeling Earth Systems and Environment*, 11(1), 41.

95. Danandeh Mehr, A., Jabarnejad, M., & Safari, M. J. S. (2025). MOGGP: A Novel Multi Objective Geometric Genetic Programming Model for Drought Forecasting. *Physics and Chemistry of the Earth, Parts A/B/C*, 103879.

94. Özdemir, S., Celebi, A., Dede, G., Maghrebi, M., & Danandeh Mehr, A. (2025). Impact of Land Use Change on Lake Pollution Dynamics: A Case Study of Sapanca Lake, Turkey. *Water*, 17(2), 182; https://doi.org/10.3390/w17020182

93. Lee, S., Moriasi, D. N., Fortuna, A. M., Mirchi, A., Danandeh Mehr, A., Chu, M. L., ... & Starks, P. (2025). Modeling the impact of measured and projected climate and management systems on agricultural fields: Surface runoff, soil moisture, and soil erosion, *Journal of Environmental Quality* 54 (1), 147-159.

92. Wang, G., Ke, C. Q., Fan, Y., Shen, X., Nourani, V., Sankaran, A., Danandeh Mehr, A. & Popov, S. V. (2024). Accelerated basal melt rates of ice shelves in North Greenland from 2013 to 2022 estimated with the high-resolution ArcticDEM. *Journal of Geophysical Research: Oceans*, 129(12), e2024JC021509.

91. Elbeltagi, A., Katipoğlu, O. M., Kartal, V., Danandeh Mehr, A., Berhail, S., & Elsadek, E. A. (2024). Advanced reference crop evapotranspiration prediction: a novel framework combining neural nets, bee optimization algorithm, and mode decomposition. *Applied Water Science*, 14(12), 256.

90. Thi Bui, Q. A., Jani, R., Mohajeri, F., Shabani, E., & Danandeh Mehr, A. (2025). Investigation of nonlinear dynamics and stochastic characteristics of fine particulate matter in urban environments. *Acta Geophysica*, *73*(2), 1989-2004..

89. Lee, S., Nourani, V., Danandeh Mehr, A., Moriasi, D., & Mirchi, A. (2024). Wavelet-Entropy Enhanced Clustering: A Comprehensive Analysis of Drought Patterns in the Southern Plains, USA. *Journal of Hydrometeorology*, 25(12), 1809-1822.

88. Partani, S., Danandeh Mehr, A., Amir Ahmadi, K., Alaei, M., Maghrebi, M., Taniwaki, R. H., & Jafari, A. (2024). Identifying toxic elements in water, sediments, and roots of mangrove forest (Avicennia marina) in Chabahar Bay, Sea of Oman. *Science of The Total Environment*, 954, 171518.

87. Hussain, A., Reihanifar, M., Niaz, R.; Albalawi, O., Maghrebi, M., Ahmed, A.T., Danandeh Mehr, A. (2024). Characterizing Inter-Seasonal Meteorological Drought Using Random Effect Logistic Regression. *Sustainability*, 16, 8433. https://doi.org/10.3390/su16198433

86. Modaresi, F., Danandeh Mehr, A., & Kazemi Choolanak, A. (2025). SMRF: a new class-based probabilistic approach for season-ahead monthly rainfall forecasting. *Acta Geophysica*, *73*(2), 1741-1755.

85. Danandeh Mehr, A., Shadkani, S., Abualigah, L., Safari, M. J. S., & Migdady, H. (2024). A novel stabilized artificial neural network model enhanced by variational mode decomposing. *Heliyon*, 10, e34142.

84. Partani, S., Danandeh Mehr, A., Bostanmaneshrad, F., et al. (2024). Determining the main driver of hypoxia potential in freshwater inland lakes. *Journal of Cleaner Production*, 458,142521.

83. Lee, S., Moriasi, D. N., Fortuna, A.M., Mirchi, A., Danandeh Mehr, A., Chu, M.L., Guzman, J.A. & Starks, P. (2024). Modeling the impact of measured and projected climate and management systems on agricultural fields: Surface runoff, soil moisture, and soil erosion. *Journal of Environmental Quality*, 54, (1), 147-159, DOI: 10.1002/jeq2.20565.

82. Lee, S., Moriasi, D. N., Danandeh Mehr, A., & Mirchi, A. (2024). Sensitivity of Standardized Precipitation and Evapotranspiration Index (SPEI) to the choice of SPEI probability distribution and evapotranspiration method. *Journal of Hydrology: Regional Studies*, 53, 101761.

81. Çelebi, A., Şengörür B., Torabi Haghighi, A., & Danandeh Mehr, A. (2024) Riparian Soil Pollution Caused by Sediment Metal Transport: Seasonal Changes and Ecological Risk Assessment. *Toxics*, 12(3):213.

80. Partani, S., Danandeh Mehr, A., & Jafari, A. (2024). Enhancing nutrient absorption through the influence of mangrove ecosystem on flow rate and retention time in salt marshes. *Science of The Total Environment*, 171518.

79. 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*, *69*(4), 488-505. https://doi.org/10.1080/02626667.2024.2313572

78. 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.

77. 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.

76. 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.

75. 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.

74. Achite, M., Gul, E., Elshaboury, N., Jehanzaib, M., Mohammadi, B., & Mehr, A. D. (2023). An improved adaptive neuro-fuzzy inference system for hydrological drought prediction in Algeria. *Physics and Chemistry of the Earth*, Parts A/B/C, 131, 103451.

73.Reihanifar, M., Danandeh Mehr, A., Tur, R., Ahmed, A. T., Abualigah, L., & Dąbrowska, D. (2023). A new multi-objective genetic programming model for meteorological drought forecasting. *Water*, 15(20), 3602.

72. Danandeh Mehr, A., Reihanifar, M., Alee, M. M., Vazifehkhah Ghaffari, M. A., Safari, M. J. S., & Mohammadi, B. (2023). VMD-GP: A New Evolutionary Explicit Model for Meteorological Drought Prediction at Ungauged Catchments. *Water*, 15(15), 2686.

71. Soylu Pekpostalci, D, Tur, R., Danandeh Mehr, A. (2023) Spatiotemporal Variations of Meteorological Drought across Mediterranean Region of Türkiye. *Pure and Applied Geophysics*, 180, 3089–3104.

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*80*(7), 2927-2937.

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., & Fathollahzadeh 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. 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.

62. 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.

61. 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, *Geographical Journal*. 189(1), 78-89. https://doi.org/10.1111/geoj.12478

60. 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.

59. Gholizadeh, R., Yılmaz, H., & Danandeh Mehr, A. (2022). A new binary genetic programming approach to design public transportation systems according to transit-oriented development criteria. *Scientia Iranica*, 30(3), 936-951.

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*, *148*(1), 255-268.

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*, *14*(8), 10441-10455.

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*, *66*(11), 1653-1663.

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, 875–890.

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*. 565, 1-11.

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. and 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. and 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., and 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. and 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. and 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. and 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. and Deliktas E. (2014) Successive-station monthly streamflow prediction using neuro-wavelet technique. *Earth Science Informatics* 7, 217-229.

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

Scopus/other indexed Journals:

9. Shoaei, S., Shoaei, A., & Danandeh Mehr, A. (2025). Service life prediction and life cycle assessment of pozzolanic concretes. *Journal of Civil and Environmental Engineering*, 54(117), 29-36.

8. 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.

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

6. 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.

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

4. 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.

3. Imanshoar, F. Hassanzadeh Y., Alami, M.T. and Danandeh Mehr, A (2013). Uncertainty analysis for determining density of deposits in dams' reservoirs. *Water and Soil Science* (*Agricultural Science*) 23(1):27-37. (in Farsi)

2. Danandeh Mehr, A. and Tabatabai, M. R. M (2010). Prediction of daily discharge trend of river flow based on genetic programming. *Journal of water and soil (Agricultural Science and Technology)* 24(2): 325-333. (in Farsi)

1. Danandeh Mehr, A. Oliaei, E. and Ghorbani M.A (2010). Suspended sediment load prediction based on river discharge and genetic programming method. *Watershed Management Research (Pajouhesh-va-Sazandegi)* 23(88):44-54. (in Farsi)

Books:

8. Priya K L, Brajesh Kr. Dubey, Ali Danandeh Mehr. 2025. "Proceedings of the 7th International Conference on Modelling and Simulation in Civil Engineering 2024, Volume I; Clean Water, Sanitation and Climate Action: Bridging the Gap for Global Resilience and Sustainability" Springer Singapore. https://doi.org/10.1007/978-981-95-1726-8

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:

8. Danandeh Mehr, A. Alkubaisi, H., Tur, R. (2026) Meteorological drought modeling using recurrent neural network and long short-term memory, Chapter twelve - Editor(s): Mir Jafar Sadegh Safari, Babak Vaheddoost, Drought Dynamics, Elsevier, Pages 281-294.

7. Tas, E., Tur, R., & Mehr, A. D. (2024). Artificial Intelligence-Based Sea Level Prediction: A Review of Recent Studies from a Coastal Engineering Perspective. Hydrology and Urban Water Supply, 27-42. Springer

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, A.; 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.

Magazines (Text in Farsi)

2. Danandehmehr, A., Jaidari Sh. and Soltani, Sh. (2009) *Impact of Mollasadra Dam on Kor River floods. Magazine of Payam e Niro* (170) 64-69. Ministry of Energy. Iran.

1. Danandehmehr, A. Jafari G. and Soltani, Sh. (2010) *Quantitative floodway fringe determination of rivers via multiple attribute decision making and subjective rating methods*. Research Bulletin pp. 90-95. Iran Water Resource Management Company. Iran.

Research Projects:

2025 (May) – 2026 (May), International Cooperation Program for the Development of Applied Research, 1.200.000.000,00 I.R.I. Riyals, "Developing advanced transformer encoder models to predict drought in the Urmia Lake basin using standardized precipitation evapotranspiration index". Project No: 4030321, Ministry of Science, Research and Technology (Iran)
My role: Co-PI (Ongoing project)

2021 (Jan.) – 2022 (Dec.), Foreign expert project, Ministry of Science and Technology of China, 300.000,00 ¥（Chinese Yuan), "Monitoring glacial lake change in western Asia supported by remote sensing big data and artificial intelligence", DL2021140001L,
My roles: Contribution in research proposal preparation and Foreign Researcher
Principal investigator: Prof. Chang-Qing Ke (School of Geography and Ocean Science, Nanjing University, China)

2013 (Jan.) – 2015 (Dec.), Scientific and Technological Research Council of Turkey (TUBITAK) 120.000,00 TL (Turkish Lire), FRA-PFC: Flood Risk Assessment: Present and Future Conditions in Rize (Project No. 112Y214). Projects No: 112y214.
My roles: Contribution in research proposal preparation and PhD Scholar
Principal investigator: Prof. Mehmet Özger (Civil Engineering Faculty, Istanbul Technical University, Turkey)

Technical Reports:

2. Kahya, E. Danandeh Mehr, A. 2016. *AKSA Coastal Pollution Risk Assessment.* Istanbul Technical University-North Cyprus Campuses, R&D technical report.

1. Kahya, E. Danandeh Mehr, A. 2014. *Hydrologic modeling and flood analysis along Aksu River, Giresun Province.* Istanbul Technical University, R&D technical report.

Conference proceedings

43. Sobhkhiz Foumani, R., Danandeh Mehr, A, Rajaei, T. 2025 "Investigating the role of statistical models in optimizing nanomaterial concentrations in porous asphalt for urban runoff". 6th international conference on soft computing (CSC2025), November 18th -19th, 2025, Gilan, Iran.

42. Alkubaisi, H., Danandeh Mehr, A., S, A., & Khan, M. M. H. Drought Modeling and forecasting using shallow and deep machine learning techniques, International Conference on Engineering and Technologies for Sustainable Development (ICETSD 2024), 28th August 2024, INTI International University, Malaysia.

41. Lee, S., Moriasi, DN, Fortuna, AM, Mirchi, A., Danandeh Mehr, A, Chu, M., Guzman, J...2023, Modeling the Impacts of Climate Change and Management Practices on Agricultural Fields: Surface Runoff and Soil Moisture Content. ASA, CSSA, SSSA International Annual Meeting

40. Hrnjica. B., A. Danandeh Mehr, E. Jakupović, A. Crnkić and R. Hasanagić, "Application of Deep Learning Neural Networks for Nitrate Prediction in the Klokot River, Bosnia and Herzegovina," 2021. *7th International Conference on Control, Instrumentation and Automation* (ICCIA), 2021, pp. 1-6, doi: 10.1109/ICCIA52082.2021.9403565.

39. Danandeh Mehr, A., R. Farhangi and A. R. Ghiasi, "The Validity of Deep Learning Computational Model for Wind Speed Simulation," 2021. *7th International Conference on Control, Instrumentation and Automation (ICCIA)*, 2021, pp. 1-5, doi: 10.1109/ICCIA52082.2021.9403583.

38. Akdemir, H., Alaybeyŏglu, A., Danandeh Mehr, A. (2020) A New Perspective to Design Phase of Water Supply Systems from Aspect of Water Demand Using Fuzzy Automation. International Conference on Intelligent and Fuzzy Systems, Izmir, Turkey.

37. Danandeh Mehr, A., Sorman, A. U., Safari, M.J.S. (2019). Meteorological Drought Analysis at North-Western Ankara. The 1st International and 4th National Congress on Iranian Irrigation and Drainage, 13-14 November 2019, Urmia, Iran (received the best oral presentation award)

36. Danandeh Mehr, A. (2019). Modern soft computing techniques and their applications in civil engineering.12th International Scientific Conference on Production Engineering (Development and Modernization of Production) 18-20 September 2019, Sarajevo, Bosnia and Herzegovina

35. Danandeh Mehr, A., Farrokh Ghatte (2019). Treated wastewater for concrete mixing; a comparative study between ASTM and Turkish standards.12th International Scientific Conference on Production Engineering (Development and Modernization of Production) 18-20 September 2019, Sarajevo, Bosnia and Herzegovina

34. Taş E., Ağıralioğlu N., Danandeh Mehr, A., Tür, R. (2019). A brief review of experimental friction loss studies for polyetylene pipes. 12th International Scientific Conference on Production Engineering (Development and Modernization of Production) 18-20 September 2019, Sarajevo, Bosnia and Herzegovina

33. Ağıralioğlu N., A. Danandeh Mehr, Ciftci M., Ö. Akdeğirmen (2019). Flood Wave Routing at Çamliova Reservoir, Antalya, Turkey. 4th Eurasian Conference on Civil and Environmental Engineering (ECOCEE 2019) Conference 17-18 June 2019. Istanbul, Turkey.

32. Ağıralioğlu N., A. Danandeh Mehr, 2019. (2019). Principals of Planning and Realization of Greater Melen Water Supply Project, Turkey. 4th International conference on Civil and environmental Geology and Mining Engineering (ICOCEM 2019), 20-22 April 2019, Trabzon/ Turkey.

31. Danandeh Mehr A., Bagheri F., Reşatoğlu R. (2019) A Genetic Programming Approach to Forecast Daily Electricity Demand. In: Aliev R., Kacprzyk J., Pedrycz W., Jamshidi M., Sadikoglu F. (eds) *13th International Conference on Theory and Application of Fuzzy Systems and Soft Computing* — ICAFS-2018. ICAFS 2018. Advances in Intelligent Systems and Computing, vol 896. Springer, Cham

30. Hrnjica, B., A. Danandeh Mehr, Behrem S., and N. Ağıralioğlu, 2018. Genetic Programming for Turbidity Prediction: Hourly and Monthly Scenario. International Symposium on Urban Water and Wastewater Management (UKSAY 2018), 25-27 October 2018, Denizly/ Turkey.

29. Ağıralioğlu N., A. Danandeh Mehr, Ö. Akdeğirmen, E. Taş, 2018. Cyprus Water Supply Project: Features and Outcomes. 13th International Congress on Advances in Civil Engineering (ACE 2018), 12-14 September 2018, Izmir/ Turkey.

28. A. Danandeh Mehr, 2018. Gene Expression Programming for Monthly Streamflow Forecasting at Intermittent Rivers. International Water and Environment Congress (SUÇEV 2018), March 22-24, Bursa, Turkey.

27. Şorman, A.Ü., A. Danandeh Mehr, S. J. Hadi, 2018. Study on spatial-temporal variations of Meteorological-Agricultural droughts in Turkey. Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci., XLII-3/W4, 483-490, GeoInformation for Disaster Management Conference (Gi4DM 2018), March 19-21 Istanbul, Turkey.

26. Danandeh Mehr, A. 2016. Genetic programming and its application in water resources engineering. Joint Workshop-cum-Seminar on Soft Computing Methods in water resources engineering. Nicosia, North Cyprus.

25. Kahya, E., A. Danandeh Mehr, Şen, O, Akçakay. A., and M. Özger, 2016. A comparative study on the current and future design storms over Rize province, Turkey. 12th International Congress on Advances in Civil Engineering (ACE 2016), Istanbul, Turkey.

24. Kahya, E., A. Danandeh Mehr, D. Şen, O. and M. Özger, 2015. Climate Change Impacts on Extreme Rainfalls over Rize Province, Turkey. 10th International Congress on Civil Engineering, 5-7 May 2015 University of Tabriz, Tabriz, Iran.

23. Kahya, E., A. Danandeh Mehr, D. Bozkurt, M. Özger and D.Z. Şeker, 2014. Evaluation of the Performance of GCMs Driven RCM Outputs for Rainfall Prediction over Rize Catchment. 11th International Congress on Advances in Civil Engineering (ACE 2014), Istanbul, Turkey.

22. Danandeh Mehr, A. and F. Imanshoar. 2013, "RESCDAM Method Application For Estimating Loss Of Life Caused By Dam Break (Case Study: Shahid Madani Dam, Iran)". Proceedings of 5th Iran water resources management Conference, Power and Water University of Technology, Tehran, Iran, February 2011.

21. Özger, M., A. Danandeh Mehr, and E. Kahya, 2013. A Fuzzy Logic Approach for Flood Risk Management: An Application – Mehranrood, Iran. Flood Symposium, 325-336.Trabzon, Turkey (in Turkish).

20. Uyumaz, A., A. Danandeh Mehr, and O. Şen, 2013. "River Morphology and Fluvial Processes". Bursa 3rd International Congress on Water. pp., 1094-1099., 22-24, Bursa, Turkey.

19. Taiebipour, M. and A. Danandeh Mehr. 2011, "Integrated Flood Plain Management Strategy for Kor River Basin in Iran". Abstract of the paper accepted to be presented at the 5th International Conference on Flood Management (ICFM5), Tokyo. Japan, 27-29 September 2011.

18. Danandeh Mehr, A. Jafari, G. Soltani, Sh. and M. Mohammadpour. 2011, "Iran's National Plan for River Training and Flood Fringe Determination". Abstract of the paper accepted to be presented at the International Conference on the Status and Future of the World's Large Rivers, Vienna. Austria. April 2011.

17. Sedighi K. Danandeh Mehr A., and Zarghami M. 2011, "Flood Fringe Determination Based on Multi Criteria Weighting Method, Case Study: Ajichai River". Proceedings of 9th International Iranian civil engineering Congress, Isfahan University of Technology, Isfahan, Iran, (in Farsi).

16. Danandeh Mehr, A. Salimi, M., and Sh. Soltani. 2011, "Performance Evaluation of DLSRS Model in Quantitative Fringe Determination of Mountainous Rivers, Case Study, the Province of Khorasan E Razavi". Proceedings of 2nd Iranian national conference on applied research in water resources, Ministry of Energy, Zanjan, Iran, 18th - 19th May 2011.

15. Danandeh Mehr, A. Jafari, G. and Sh. Soltani. 2011, "Investigation of Management and Legal Challenges to Environmental Conservation of Iran's Rivers". Proceedings of Iranian national water congress with focus on clean water, Power and Water University of Technology, Tehran, Iran, 2nd – 3rd March 2011.

14. Danandeh Mehr, A. and Sh. Soltani. 2011, "Introducing and Evaluation of Iran's National Policy for Quantitative Protection of Rivers in Iran". Proceedings of 4th Iran water resources management Conference, Amirkabir University of technology, Tehran, Iran, 3rd - 4th May 2011.

13. Yaghoobi, A. Danandeh Mehr, A. and M. M. Vanolia. 2010, "Investigation of the Effect of Tidal Flows on the Floodway and Floodway Fringe Determination at Coastal Rivers". Proceedings of 1st Iranian national congress on costal water resources management, Sari Agricultural Sciences and Natural Resources University, Sari, Iran, 8th - 9th Dec. 2010

12. Danandeh Mehr, A. Sarraf, B. S. and M. R. M. Tabatabai. 2010, "Genetic Programming Application in Stream Flow and Sediment Prediction". Proceedings of 10th Symposium on Stochastic Hydraulics & Fifth International Conference on Water Resources and Environment Research, Quebec City, Canada, 5th - 7th of July 2010

11. Jafari G., Norouzi S., and A. Danandeh Mehr. 2010, "Field Investigation about Performance of Constructed Groins in Ghezelozan River". Proceedings of 8th International River engineering Conference, Shahid Chamran University, Ahvaz, Iran, 26-28 Jan. 2010 (in Farsi).

10. Danandehmehr, A. and Sh. Soltani. 2009. "Application of Artificial Intelligence on Daily Discharge Prediction". Proceedings of 8th Iranian hydraulic Conference, Tehran University, Tehran, Iran, 14th - 15th Dec. 2009

9. Danandeh Mehr, A. 2007, "Flood Control System Optimization Based on Risk Analysis in Floodplain". Proceedings of 7th International River Engineering Conference, Shahid Chamran University, Ahvaz, Iran, 13-14 Feb 2007

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.

5. Danandehmehr, A., M. M. Vanolia and M. R. M. Tabatabai. 2005. "Flood Control Structures Optimization in Urban Catchments". Proceedings of 5th Iranian hydraulic conference, Shahid Bahonar University of Kerman, Kerman, Iran, 8th - 10th Nov.

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.

3. Danandehmehr, A. 2004, "A Comparison of Structural Methods Used for the Control of Urban Floods and Selection of Optimal Structure". Proceedings of 11th students' conference on civil engineering, Hormozgan University, Bandar Abbas, Iran.

2. Danandehmehr, A. 2003. "HEC-RAS Application in Flood Damages Measurement". Proceedings of 4th Student's seminar on civil engineering, Power and Water University of technology, Tehran, Iran, 2003

1. Danandehmehr, A. 2003. "Evaluation and Measurement of Flood Damages". Proceedings of 10th Civil Engineering Students Conference, Amir Kabir University of technology, Tehran, Iran, 21st - 23rd Oct. 2003

Research interests: Statistical Hydrology; Hydroinformatics; Natural Hazards; River Basin Modeling

Supervised M.Sc. and Ph.D. Thesis

M.Sc.

- Nashrah Farooq, 2026-2027 (Antalya Bilim University), Climate Change Impacts on Tourism along Antalya coast < in progress >
- Barış Taş, 2024-2026 (Antalya Bilim University), Hydrological Clustering of Akdeniz Basin Using Emerging Machine Learning Techniques < in progress >
- Şehriban Tuğçe Buruzan, 2024-2026 (Antalya Bilim University), Optimum Storage Sizing for Rainwater Harvesting in Antalya: Hydrological Simulation and Economic Assessment < in progress >
- Nooria Soltani, 2024-2025 (Antalya Bilim University), Advanced genetic programming models for precipitation forecasting.
- Hasan Zirabadi, 2024-2025 (University of Bojnord, Iran), Investigation on the effect of streamflow regime on nitrate concentration <co-advisor >
- Iman Sardarian Bajgiran, 2024 (Ferdowsi University of Mashhad, Iran), Prediction of SPEI and SPI drought indices using time delay neural networks in different climatic conditions <co-advisor >
- Hiba Alkubaisi, 2023-2024 (Antalya Bilim University), Drought modeling and forecasting using emerging deep learning techniques.
- Melike Çiftçi, 2023-2024 (Akdeniz University), Flood Routing along the Aksu River, Giresun <co-advisor>
- Enes Hişam, 2021-2022 (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, Iran), 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, Iran), 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, Iran), Monthly rainfall prediction using standard and linear genetic programming and comparing with ARIMA model < co-advisor >

Ph.D.

- Dilayda Soylu (Akdeniz University, Turkey), Climate changes impact on drought across Akdeniz Basin, Turkey < 2020-2024, co-advisor >
- Aidin Rahmani -Rezaeieh (Islamic Azad University, Iran), Climate changes impact on floodway: a case study on Shahrchi River < 2018-2021, co-advisor >

Thesis Examination / Jury Participation

- 2026 External examiner – PhD thesis, Özgün Akdegirmen, Suleyman Demirel University, Turkey
- 2025 External examiner – PhD thesis, Mohammadhosein Masouminia, Eastern Mediterranean University, Northern Cyprus
- 2024 External examiner – PhD thesis, Juan Wu, Nanjing University, China

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.:** Machine Learning in Civil Engineering, Advanced Hydrology, River Engineering, Scientific Research Techniques and Ethics.
- **Ph.D.:** Special Topics in Hydrology