CURRICULUM VITAE

Ali Danandeh Mehr

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

2012 – 2016	**Ph.D.**

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

Languages

English: Fluent   **Turkish:** Fluent   **Farsi:** Fluent

List of Publications

Selected papers (SCI/SCI-E Journals)

11. Maghrebi, M., Noori, R., Bhattarai, R., Yaseen, Z. M., Tang, Q., Al-Ansari, N., **Danandeh Mehr, A.**, Karbassi, A., Omidvar J. Farnoush H., & Torabi Haghighi, A. (2020). Iran's Agriculture in the Anthropocene. *Earth's Future*, e2020EF001547.

10. 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.

9. **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.

8. **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.

7. **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.

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

5. **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.

4. **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.

3. **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.

2. **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.

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.

Other peer-reviewed journal papers (SCI/SCI-E/ESCI Journals):

25. **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).

24. **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.

23. 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(494). https://doi.org/10.1007/s12517-020-05444-1

22. 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, https://doi.org/10.1007/s00704-020-03257-6.

21. 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.

20. 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.

19. **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.

18. **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.

17. **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.

16. 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.

15. 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.

14. **Danandeh Mehr, A.,** 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.

13. **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.

12. 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.

11. 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

10. **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.

9. 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.

8. 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.

7. 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.

6. **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.

5. **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.

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

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

2. 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 Hydroinformatics16 (6), 1318-1330.

1. **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.

Books:

1. 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

Book Chapter:

3. 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.

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.

Research Projects:

1. Kahya, E. Özger, M., **Danandeh Mehr, A.** et al. 2013-2015. *FRA-PFC: Flood Risk Assessment: Present and Future Conditions in Rize, Turkey (Project No. 112Y214).* Scientific and Technological Research Council of Turkey (TUBITAK). Projects No: 112y214.

Conference proceedings (Oral presentations)

10. **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)

9. **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

8. 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.

7. 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.

6. 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.

5. **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.

4. 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.

3. 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.

2. 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.

1. 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.

Awards and honors

2019	Top Researcher (Antalya Bilim University)
2018	Top Researcher (Antalya Bilim University)
2017	Young Researcher (Near East University)
2017	Publons Peer Review (One of top one percent peer reviewers)
2016	Best Ph.D. Thesis, Istanbul Technical University

Professional Software Application Experience

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

Research interests

- Data Science and Machine Learning Methods
- IoT in Hydro-environmental Management
- Stochastic processes and signal/image processing
- Climate Change Impacts Assessment on Natural Resources