

## CURRICULUM VITAE

**Ali Danandeh Mehr**

**ORCID:** 0000-0003-2769-106X

**Researcher ID:** S-9321-2017

**h-index:** 24

**Total Number of SCI/SCI-E/ESCI Papers:** 57

**Date/Place of Birth:** 08.09.1979 / Tabriz, Iran

Water, Energy and Environmental Research Unit  
University of Oulu, Oulu, Finland.  
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Civil Engineering Department,  
Faculty of Engineering, 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

- 16.08.2021 –      **Postdoc Researcher**, Water, Energy and Environmental Research Unit  
University of Oulu, Oulu, Finland
- 04.10.2019 –      **Associate Professor**, Civil Engineering Department,  
Faculty of Engineering, Antalya Bilim University, Antalya, Turkey.
- 29.04.2019 –      **Associate Professor** in Civil Engineering,  
Presidency of the inter-university board, Republic of Turkey
- 2017 (September) **Assistant Professor**, Civil Engineering Department,  
–2019 (September) Faculty of Engineering, Antalya Bilim University, Antalya, Turkey.
- 2016 (July)      **Postdoctoral Research Fellow**, Water Resources Engineering Department  
–2017 (July)      Faculty of Civil Engineering, University of Tabriz, Tabriz, Iran.
- 2017 – 2017      **Flying Lecturer**, Civil Engineering Department  
Near East University, Nicosia, North Cyprus.
- 2016 – 2016      **Part-time 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.
- 2011 – 2012      **Guest Lecturer**, Continuing Education Centre  
Power and Water University of Technology, Tehran, Iran.
- 2010 – 2011      **Part-time Lecturer**, Aghahan Niroo Higher Employees Education Centre  
University of Applied Science and Technology, Tehran, Iran.
- 2009 – 2012      **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  
Hydrologic 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  
Hydrologic and hydraulic design of bridges and culverts for a highway project

### **Awards/honors**

- 2020              Top 2% Scientist in the field of Engineering announced by Elsevier and Stanford University
- 2020              Top Researcher Award (Antalya Bilim University)
- 2019              Top 2% Scientist in the field of Engineering announced by Scopus and Stanford University
- 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              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
- 2004              Ranked 3<sup>th</sup> among presented papers in the Hydraulic Structures Section.  
11<sup>th</sup> Iranian Civil Engineering Students Conference, Bandar Abbas, Iran

### **Languages**

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

### **Professional Software Application Experience**

- HEC Series (HMS, Geo-HMS, RAS, Geo-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 and Reviewer for Peer-reviewed Journals/Conferences**

- Turkish Journal of Engineering and Environmental Sciences (2014; Subject Editor)
- Journal of Civil and Environmental Engineering (University of Tabriz: Editorial Board: Sine 2020)
- Advance Research in Civil Engineering (Editorial Board: Sine 2019)
- 6<sup>th</sup> National Congress on Civil Engineering, Semnan, Iran (April 2011; reviewer)
- 10<sup>th</sup> International Congress on Civil Engineering, Tabriz, Iran (May 2015; reviewer)
- 2016 International Conference on Water Resource and Environment (WRE2016), Shanghai, China. (July 2016; reviewer)
- 1<sup>st</sup> International and 4<sup>th</sup> National Congress on Iranian Irrigation and Drainage, Urmia, Iran (November 2019; reviewer)
- 2014 – Present; peer review of more than 260 research manuscripts and book proposals. The list is available in Publons: <https://publons.com/author/660918/ali-danandeh-mehr#profile>)

### **Technical Program Committee Member**

- Special Session Chair: 7th International Conference on Control, Instrumentation and Automation (ICCIA), Tabriz, Iran.
- *Keynote speaker and International Program Committee*: 12<sup>th</sup> 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*: 9<sup>th</sup> 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*: 13<sup>th</sup> 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:**

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., Yilmaz, H., & Danandeh Mehr, A. (2022). *Multitemporal meteorological drought forecasting using Bat-ELM*. *Acta Geophysica*, 1-11.
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., Yılmaz 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 Ađraliođlu 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 programming 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., Agiralioğlu, 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 Heddami, 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 Konyaalti 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):**

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.
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.
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(3(88)):44-54.

**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 niroo (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:**

2. Kahya, E. Özger, M., Danandeh Mehr, A. et al. 2013-2015. *FRA-PFC: Flood Risk Assessment: Present and Future Conditions in Rize (Project No. 112Y214)*. Scientific and Technological Research Council of Turkey (TUBITAK). Projects No: 112y214.
1. Aidi, Z. Danandeh Mehr, A. Darvishi E. Niksokhan MH. 2012-2013. *Development of DLSRS model for flood fringe determination using regional estimation of 25-year discharge*. Iran Water Resources Management CO (IWRMC). Project No: RIV6-90061.

**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**

- 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., Alaybeyöglu, 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. 12<sup>th</sup> 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. 12<sup>th</sup> International Scientific Conference on Production Engineering (Development and Modernization of Production) 18-20 September 2019, Sarajevo, Bosnia and Herzegovina
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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 12<sup>th</sup> student’s conference on civil engineering, Iran University of Science and Technology, Tehran, Iran, 21<sup>st</sup> - 23<sup>rd</sup> Dec.

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2. Danandehmehr, A. 2003. “HEC-RAS Application in Flood Damages Measurement”. Proceedings of 4<sup>th</sup> Student’s seminar on civil engineering, Power and Water University of technology, Tehran, Iran, 2003

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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

### **Advised M.Sc. and Ph.D. Thesis**

#### **M.Sc.**

- Ceren Dinler, 2021 (Antalya Bilim University), Regional flood frequency analysis in Akdeniz Basin <ongoing>
- Erkin TAS, 2021 (Akdeniz University), Prediction of sea level changes using meteorological factors <ongoing, co-advisor>
- Enes Hişam, 2021 (Istanbul Technical University), Performance assessment of satellite-based rainfall products over Akdeniz Basin < ongoing, co-advisor>
- Esmâ 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 (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>

### **Courses taught over the past four years.**

- B.Sc.  
Water Resources 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