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EDUCATION

PhD

2004 –2008

Ege University, İzmir, Turkey.

Civil Engineering Department, Hydraulic Division

“The Transfer Matrix Method For The Solution Of One Dimensional Flow Problems”

Supervisor: Prof. Dr. Birol Kaya- Prof. Dr. Selim Altun

MS

2001 - 2004

Ege University, İzmir, Turkey.

Civil Engineering Department, Hydraulic Division

“Water Surface Profiles For Maximum Flood Discharges Bornova Creek”

Supervisor: Prof. Dr. Birol Kaya

Advisor: Dr. Ahmet Alkan

BS

1991-1994

Water Engineering

Urmia University, Urmia, Iran

RESEARCH INTEREST

- Open-channel flow
- Computational fluid dynamics
- Groundwater modeling
- River Engineering
- Sediment transport
- Pipe Hydraulics
- Water Hammer

TEACHING EXPERIENCE

University of Maragheh, Maragheh, Iran

September 2008 - Present

- Advanced hydraulic (MS)
- Computational Hydraulics (MS)
- Physical models (MS)
- Fluid mechanics (BS)
- Hydraulics (BS)
- Water and Wastewater Engineering (BS)
- Computer programming by MATLAB (BS)

PUBLICATIONS

Books

- Advanced Numerical Methods in Fluid Mechanics Engineering, Amidi Publications, Tabriz, 2009. (in Persian).
- Fluid Mechanics, University of Maragheh, 2010, (in Persian).
- A Review of Hydraulic of Free Surface Flow, University of Maragheh, 2012, (in Persian).
- Simulation of Hydraulic Problems Using Fluent, Amidi Publications, Tabriz, 2013. (in Persian).
- Review of the Computational Hydraulics, University of Maragheh, 2018, (in Persian).

JOURNAL PUBLICATIONS

- **Daneshfaraz, R.**, Sadeghfam, S. and Tahni, A. (2019) “Experimental Investigation of Screen as Energy Dissipators in the Movable-Bed Channel”, *Iranian Journal of Science and Technology, Transactions of Civil Engineering*, <https://doi.org/10.1007/s40996-019-00306-7>
- **Daneshfaraz, R.** Minaei, O., Abraham, J., Dadashi, S. and Ghaderi. A. (2019) “3-D Numerical simulation of water flow over a broad-crested weir with openings”, *ISH Journal of Hydraulic Engineering*, <https://doi.org/10.1080/09715010.2019.1581098>
- Sadeghfam, S., **Daneshfaraz, R.**, Khatibi, R., and Minaei, O., (2019) “Experimental studies on scour of supercritical flow jets in upstream of screens and modelling scouring dimensions using artificial intelligence to combine multiple models (AIMM)”, *Journal of Hydroinformatics*, <https://doi.org/10.2166/hydro.2019.076>
- Norouzi, R., **Daneshfaraz, R.** and Ghaderi, A., (2019), “Investigation of discharge coefficient of trapezoidal labyrinth weirs using artificial neural networks and support vector machines”, *Applied Water Science*, 9 (45), 3-10, <https://doi.org/10.1007/s13201-019-1026-5>
- **Daneshfaraz, R.**, Mirzaee, R. and MajediAsl, M. (2019), “The S-jump's Characteristics in the Rough Sudden Expanding Stilling Basin”, *AUT Journal of Civil Engineering*, <https://doi.org/10.22060/AJCE.2019.16427.5586>

- **Daneshfaraz, R.**, Dasineh, M. Ghaderi, A. Sadeghfam, S. (2019), “Numerical Modeling of Hydraulic Properties of Sloped Broad Crested Weir”, *AUT Journal of Civil Engineering*, <https://doi.org/10.22060/AJCE.2019.16184.5574>
- **Daneshfaraz, R.**, Rezazadehjoudi, A. and Abraham, J. (2018) " Numerical investigation on the effect of sudden contraction on flow behavior in a 90-degree bend", *KSCE Journal of Civil Engineering*, Volume 22, Issue 2, pp 603–612 <https://doi:10.1007/s12205-017-1313-3>
- Sadeghfam, S., Ehsanitarbar, A., Khatibi, R., & **Daneshfaraz, R.** (2018). Investigating ‘risk’ of groundwater drought occurrences by using reliability analysis. *Ecological Indicators*, 94, 170-184. <https://doi.org/10.1016/j.ecolind.2018.06.055>
- Gorman, J. M. Sparrow, E. M. Smith, C. J. Ghosh, A. Abraham, J. P. **Daneshfaraz, R** & A. Rezazadeh Joudi (2018)“, In-bend pressure drop and post-bend heat transfer for a bend with a partial blockage at its inlet”, *Numerical Heat Transfer*, Volume 73, Issue 11, Pages: 743-767. <https://doi.org/10.1080/10407782.2018.1460564>
- **Daneshfaraz, R.**, Sadeghfam, S., & Ghahramanzadeh, A. (2017). Three-dimensional numerical investigation of flow through screens as energy dissipators. *Canadian Journal of Civil Engineering*, 44(10), 850-859. <https://doi.org/10.1139/cjce-2017-0273>
- Sadeghfam, S., Khatibi, R., Hassanzadeh, Y., **Daneshfaraz, R.**, & Ghorbani, M. A. (2017). Forced hydraulic jumps described by classic hydraulic equations reproducing cusp catastrophe features. *Arabian Journal for Science and Engineering*, 42(9), 4169-4179. <https://link.springer.com/article/10.1007%2Fs13369-017-2616-x>
- **Daneshfaraz, R.** Rahmati, M., and Akbari Moghanjiq, P. (2017)” Soil erosion and sediment mapping in Aidoghmouth watershed applying MPSIAC model and GIS and RS technologies”, *Environmental Resources Research*, Volume 5, Issue 1, Page 35-49, <https://doi.org/10.22069/IJERR.2017.9991.1119>

- **Daneshfaraz, R.** and Ghaderi, A. (2017) “Numerical Investigation of Inverse Curvature Ogee Spillway”, *Civil Engineering Journal*, Vol. 3, No. 11, Pages: 1146-1156. <https://doi.org/10.28991/cej-030944>
- **Daneshfaraz, R.,** Ghahramanzadeh, A., Ghaderi, A., Rezazadeh Joudi, A. and Abraham, J. (2016) "Investigation the effect of edge shape on characteristics of flow under vertical gates", *Journal American Water Works Association*, Volume / Number: 108, 8, PP: 425-432, <https://doi.org/10.5942/jawwa.2016.108.0102>
- Pakger, F., **Daneshfaraz, R.,** and Rezazadeh Joudi, (2016) "Numerical Simulation of Flow on a Siphon Spillway and Investigation of the Effect of a Bottom/Outlet Angle on Hydraulic Parameters", *Sigma Journal Engineering and Natural Sciences*, 34 (1), 279-290.
- Sadeghfam, S., Akhtari, A. A., **Daneshfaraz, R.,** & Tayfur, G. (2015). Experimental investigation of screens as energy dissipaters in submerged hydraulic jump. *Turkish Journal of Engineering and Environmental Sciences*, 38(2), 126-138. <https://journals.tubitak.gov.tr/engineering/abstract.htm?id=16367>.
- **Daneshfaraz, R.,** Kaya, B., Sadeghfam, S., and Sadeghi, H., " Simulation of Flow over Ogee and Stepped Spillways and Comparison of Finite Volume and Finite Element Methods" *Journal of Water Resource and Hydraulic Engineering (JWRHE)*. Jun. 2014, Vol. 3 Iss. 2, PP 37-47.
- Hasanpur, M., **Daneshfaraz, R.,** Ghorbani, M. A., Najafi, M. R. and Kisi, O., (2013) "Comparison of different methods for developing a stage–discharge curve of the Kizilirmak River", *Journal of Flood Risk Management*, <https://doi.org/10.1111/jfr3.12064>
- **Daneshfaraz, R.,** and Kaya, B., (2008) " Solution of the propagation of the waves in open channels by Transfer Matrix Method " Elsevier. , *Ocean Engineering* , Volume 35, Issues 11–12, PP:1-14. <https://doi.org/10.1016/j.oceaneng.2008.05.002>

CONFERENCE PAPERS

- Sezer, A., Inan and **Daneshfaraz, R.** "Comparison Of The Numerical Solutions Of The Unsteady Flow In Open Channels Of Trapezoidal Cross-Section", 2. Ulusal Su Muhandisligi Sempozyumu, 2005, PP: 661-671, Gumuldur.
- Sezer, A., Inan and **Daneshfaraz, R.** "Solution Of The Unsteady Flow In Open Channels Of Rectangular Cross-Section By Various Methods", 2. Ulusal Su Muhandisligi Sempozyumu, 2005, PP: 399-409, Gumuldur.
- Kaya, B., **Daneshfaraz, R.**, Alkan and Eris "Flood Peak Discharges And Cross-Section Capacities Of Laka Creek, EUROPEAN WATER RESOURCES ASSOCIATION", *EWRA SYMPOSIUM ON WATER RESOURCES MANAGEMENT: RISKS AND CHALLENGES FOR THE 21 ST CENTURY PROCEEDINGS*", 2-4 September 2004, PP: 687-692.
- Eris., **Daneshfaraz, R.**, Alkan and Kaya, B. Channel Capacity Analysis Of Laka Stream For Floods, 2005, PP:495-502, Gumuldur.
- Kaya, B., **Daneshfaraz, R.**, "Water Surface Profile Of Bostanli Creek ", 2005, PP: 485-493. Gumuldur.
- **Daneshfaraz, R.**, and Aklik, P., "New Material in Coastal Areas: Geosynthetics ", 5. Ulusal Kiyi Mühendisligi Sempozyumu 5-7 Aralık 2005, Bodrum.
- Majedi Asl and **Daneshfaraz, R.**, "Study On Hydraulic Parameters Of Steady Flow Of River In Terms On Building Water Structures". Proceedings of the 3rd International Conference on Seismic Retrofitting, Tabriz, Iran, 20-22 October 2010.
- Karimi, Mosavi, Feiziasl and **Daneshfaraz** , "The Effect Rye Green Manure Application With Nitrogen Fertilizer On Soil Aggregate Stability Stability And Water Infiltration Rate In Maragheh Dry Land Condition", *INTERNATIONAL SOIL SCIENCE CONGRESS ON*,. May 26-28, 2010, Samsun.
- Mosavi, Jafarzadeh, Neishabouri, Feiziasl, Karimi, Mahdavinia and **Daneshfaraz** , " The Effect Rye Green Manure Application With Nitrogen Fertilizer On Soil Available Water Capacity In Maragheh Dry Land Condition ", *INTERNATIONAL SOIL SCIENCE CONGRESS ON*,. May 26-28,2010,Samsun.
- Majedi Asl,M., Yasi, M. and Daneshfaraz, R. " Comparison of The Simulation Results of Steady Flow Characteristics Between 1D Model (Hec-Ras) and 2D Model (Fast-2D)

in the Nazloo River Reach", River Corridor Restoration Conference , 13-18 March, 2011, Ascona. Switzerland .

- Jahanpeyma , Delavar, **Daneshfaraz** and Majedi asl “The Use Of Monte Carlo Method For Evaluation Of Uncertainty Propagation In Assessment Of Tehran Seismic Vulnerability”, 6th International Conference On Seismology and Earthquake Engineering, 16 May., 2011. Tehran, Iran.
- **Daneshfaraz, R.**, Keshavarzi, A., Sayadzadeh, F and Menazadeh, M., "FLOOD ZONING OF V-SECTIONS IN GIS USING HEC-RAS HYDRAULIC MODEL (CASE STUDY: GHALE CHAY RIVER)", 7th International Symposium on Civil and Environmental Engineering, 29-30 Nov 2012, European University of Lefke, Turkish Republic of Northern Cyprus.
- **Daneshfaraz, R.**, Sadeghfam, S., Patakcı, A., and Zayni, F., (2011). “Flood Determination and **Control** of Flood Risk in the Mehraneh River Basin,” The 3rd National Conference on Irrigation Drainage Network Management, Shahid Chamran University, Ahwaz, Iran (in Persian).
- Valizadeh Moghadam, S., Hasanzadeh, Y. and **Daneshfaraz, R.**, "Comparison of the Sensitivity Analysis of Manning (n) Coefficient of HEC-RAS and MIKE11 Models(Case study : Qarasu River)", International Conference on Civil Engineering Architecture & Urban Sustainable Development , December 18-19, 2013.
- Eghbal, B. , **Daneshfaraz, R.**, and Badalzadeh, M. " Investigating of Variation of Geometrical Parameters in Rubber Dams Due to Changes of Internal Pressures", 11 International Congress on Advances in Civil Eng. (ACE2014), 21-25 October 2014, Istanbul, Turkey.
- Shokri Jahandizi, R. and **Daneshfaraz, R.**, 2016, " A nonstandard finite difference scheme for the St. Venant equations", The 6th Seminar on Numerical Analysis and Its Applications, Maragheh, Iran.
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