Curriculum Vitae

Negin Binesh

PERSONAL INFORMATION

Full Name: Negin Binesh

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Mobile phone number: [redacted]

Gender: Female

SUMMARY

- Experienced in conducting research on different branches of “Water Engineering”, "Green infrastructure effectiveness in the face of future climatic conditions", and “Natural Hazard Management” including “Urban Flooding”, 5 years of teaching experience, 3 months of participating in doing a project of United Nations, 3 years of being the head of “Hazards and Relief” department in Applied Science University, Iran.

- 20 Journal publications (Some ISI papers and others mostly published in Iranian Research Journals), 40 Conference papers including presentations in International Conferences, and three other papers extracted from doctoral thesis (under Review/Preparation).

- Ranked 1st in the ArcMap GIS elementary level Exam held by the Iranian Technical and Vocational Training Organization with a score of 97.12 out of 100). Ranked 2nd among all the students in Bachelor program (2005), Ranked 8th (out of around 100) in the National M.Sc. Entrance Exam (2005), Among the top students during master program (2008), Ranked 4th (out of around 150) in the National Doctoral Entrance Exam (2014), Best Presentation Award in “20th International Conference on Adaptive and Integrative Water Management” in Prague, Czech Republic (2018).

RESEARCH EXPERIENCE

Researcher, INRS (Institut National de la Recherche Scientifique), Quebec, Canada (14 May 2021 _ 22 December 2022)

Project Title: Monitoring and Modelling of Sustainable Stormwater Management Infrastructure in Urban Areas

Researcher, University of Messina, Italy (27 August 2019 – 13 May 2021)

Project Title: Innovation tools for Improving Flood Risk Reduction Strategies

Visiting Graduate Student, University of Innsbruck, Austria; Dec. 2017 – May 2018)

EDUCATION

Ph.D. in Environmental Engineering (Water Resources)

University of Tehran, Tehran, Iran; 23 Sep. 2014 – 27 Apr. 2019. *(GPA: **18**/20)*

***Thesis*:** Developing an Integrated model for Sustainable Urban Drainage System in adaptation to Climate Change

M.Sc. in Civil Engineering (Hydraulic Structures), Razi University, Iran; Sep 2012 – Sep 2014. *(GPA. **16.61**/20)*

M.Sc. in Natural Disaster/Hazard Management

University of Tehran, Tehran, Iran; Sep. 2005 – 10 March 2008. *(GPA. **17.76**/20)*

B. Sc. in Agricultural Water Engineering

Razi University, Iran; Sep. 2001– July 2005. *(GPA. **15.98**/20)*

Diploma in Mathematics and Physics

Be'sat (Exemplary) high-school, Kermanshah, Iran. *(GPA. **19.29**/20)*

TEACHING EXPERIENCE

- June 2009 – August 2014: Teaching different courses especially in the field of "hazard management", Applied-Science University (and some other institutions), Iran.
- October 2018 - February 2019: Instructing Storm-Water Management Model (SWMM) in a high-ranked virtual institute (Namely Faradars).
- June 2019 – November 2021: Instructing "Flood Modeling" in a high-ranked virtual institute (Namely Faradars).

JOB EXPERIENCE

- September 2006 – December-2006: Cooperation as a Hazard Expert/Analyst in a UNDP project namely: developing hazard database (DesInventar), Iranian Planning and Management Organization, Tehran, Iran.
- October 2011 – August 2014: Full time lecturer and head of "Hazards and Relief" Department in Applied-Science University, Iran.

JOURNAL REFEREE

- Journal of Water Resources Management
- Urban Water Journal

BOOK TRANSLATION (from English to Persian)

- Bulletin entitled: "Role of Dams on the Development and Management of River Basins", No. 149, Iranian National Committee of Large Dams (IRCOLD), 2014.
- Bulletin entitled: "Global Climate Change, Dams, Reservoirs, and Related Water Resources", V11.FINAL, Iranian National Committee of Large Dams (IRCOLD), 2015.

JOURNAL PUBLICATIONS

Binesh, N., Niksokhan, M.H., Sarang, A., Rauch, W. and Aronica, G.T. 2022. Quantifying the UDS Hydraulic and Social Resilience to Flooding: an Index-Based Approach vs. a Parameter-Based MCDM Method, Water, 14(13), 22 pp.

Proteau, K., **Binesh, N.**, Duchesne, S., Pelletier, G. and Lavoie, I. 2022. Qualitative and quantitative control of urban runoff: A functional comparison of various types of retention and detention basins", Urban Water Journal, 19(10), 1080-1092.

Binesh, N., Niksokhan, M.H., Sarang, A. and Rauch, W. 2019. Improving Sustainability of Urban Drainage Systems for Climate Change Adaptation using Best Management Practices, Hydrological Sciences Journal, 62(3), 381-404.

Binesh, N., Niksokhan, M.H., and Sarang, A. 2019. A study of future rainfall and runoff regime in WFD catchment, Iranian Journal of Civil and Environmental Engineering, Amir-Kabir University, 50(5), 815-826.

Binesh, N., Niksokhan, M.H., and Sarang, A. 2018. The analysis of climate change impact on extreme rainfall in WFD catchment, Iranian Journal of Watershed Management Research, 9(17): 226-234.

Binesh, N., Niksokhan, M.H., and Sarang, A. 2018. The need for building resilience in urban drainage systems under uncertain future conditions, Iranian Journal of Water and Sustainable Development, 5(1): 55-66.

Binesh, N., Niksokhan, M.H., and Sarang, A. 2018. Quantifying urban drainage system resilience based on hydraulic performance assessment, Iranian Journal of Water and Wastewater, 29(5), 112-119.

Binesh, N., Niksokhan, M.H., and Sarang, A. 2018. Sustainable urban drainage systems in adaptation to climate change: A review, Iranian Journal of Water and Sustainable Development, 4(2): 81-94.

Binesh, N., Niksokhan, M.H., and Sarang, A. 2017. Quantitative and qualitative sustainable management of flooding in urban environment, Iranian Journal of Human and Environment.

Binesh, N., Niksokhan, M.H., and Sarang, A. 2017. Trend Detection in Tehran Temperature and Precipitation during three past decades, Journal of Iranian Meteorological Origination: Nivar, 41(96), 36-45.

Binesh, N., Niksokhan, M.H., and Sarang, A., 2017, A study of the effect of rainfall variability on Darakeh river flow rate during 1989-2012, Iranian Journal of Ecohydrology, 3(3), 465-476.

Binesh, N., and Bonakdari, H., 2017. Introducing a one-dimensional model for estimating velocity distribution in narrow open-channels, Modarres Civil Engineering Journal, 16(20), 33-43.

Binesh, N., and Sedaghatjou, A.M. 2016. Non-structural and functional vulnerabilities assessment of Imam Khomeini Hospital located in Songhor and Kolya'ee Township, Kermanshah province, Iranian Journal of disaster Prevention and Management Knowledge, 5(4), 297-307.

Binesh, N., Niksokhan, M.H., and Sarang, A., 2016, Precipitation trend Analysis and determination of dry/wet years in Kan Watershed during recent years, Iranian Journal of Extension and Development of Watershed Management, 4(14), 9-16.

Binesh, N., Niksokhan, M.H., and Sarang, A., 2016, Performance assessment of urban drainage system (Case Study: District 10 of Tehran Municipality), Journal of Computations and Materials in Civil Engineering, 1(3), 133-141.

Binesh, N., and Bonakdari, H., 2016. Evaluating mathematical models for velocity distribution and dip phenomenon in rectangular open channels, Journal of Computations and Materials in Civil Engineering**,** 1(2), 99-108.

Binesh, N., and Sarang, A. 2015. Investigating the effect of catchment's physiographic characteristics on the shape of flood hydrograph (A comparison of Damavand, Kasilian, and Vardij watersheds), Iranian Water management journal, 3(6), pp. 65-79.

Binesh, N., and Omidvar, B. 2015. Economic recovery after disasters (Case study: affected rural areas of Lorestan province in Iran), Iranian Monthly Journal of Roads and Structures, 107, 5367, 53-67.

Binesh, N., and Bonakdari, H. 2014. Investigating different models for estimation of longitudinal velocity distribution in rectangular open channels, Applied Mathematics in Engineering Management and Technology, 19-27.

Binesh, N., and Bonakdari, H. 2014. Longitudinal Velocity Distribution in Compound Open Channels: Comparison of Different Mathematical Models, International Research Journal of Applied and Basic Sciences, Science Explorer Publications, 8(9), 1149-1157.

Binesh, N., Bonakdari, H., and Moazzamnia, M. 2014. Application of entropy theory as a tool in environmental and water resources modelling, Iranian Journal of Water and Wastewater Engineering, 78, 4-13.

Omidvar, B., and **Binesh, N.** 2012. Reconstruction experience of Lorestan 2006 Earthquake: Elimination of Transitional Shelter, Indian Journal of Disaster Advances, 5(1), 37-43.

SELECTED PRESENTATIONS IN CONFERENCES

"Stormwater Control Infrastructure: An investigation of four case studies", *Canadian Water and Wastewater Conference*, November 6-9, 2022, Halifax, Nova Scotia, Canada.

"Using Best Management Practices for Strormwater Quality Improvement: Study of Two Urban Catchments", *The 36th Eastern Canadian Symposium on Water Quality Research*, November 4, 2022, Quebec, Canada.

"Prioritization of Infrastructures' Criticality: A Multi-Criteria Decision Analysis v.s. Using Vulnerability Curves", *Proceedings of the 39th IAHR World Congress*, 19–24 June 2022, Granada, Spain.

"A Comparative Study Of Two Flood-Prone Communities Against River Flooding: Berat (Albania) And Sarajevo (Bosnia)", *Proceedings of the 39th IAHR World Congress*, 19–24 June 2022, Granada, Spain.

"Urban Drainage System Reliability in a Changing Climate", *RHQ22 Congress: Hydrological Research in Quebec (4th Edition: "Imagine the Hydrology of Tomorrow")*, Quebec City, Canada, May 2022.

"Climate-Resilient Infrastructures: A case study of Urban Strormwatr Drainage System". *The INRS scientific conference on Resilience and Reinvention"*, Canada, Feb. 2022.

"A framework for Classifying the Most Vulnerable Urban Infrastructures to Flooding". The 6th IAHR Europe Congress, Warsaw, Poland, 15th-18th Feb. 2021.

"Improving the Performance of Urban Drainage System in Adaptation to Climate Change in an Integrated, Sustainable way". The 6th IAHR Europe Congress, Warsaw, Poland, 15th-18th Feb. 2021.

"Improving Resilience of Urban Drainage System in Adaptation to Climate Change (Case Study: Northern Tehran Iran)", CSCE Annual Conference on Building Tomorrows' Society, 16th International Environmental Specialty, Fredericton Convention Centre, Fredericton, Canada, 2018.

"Coupling Fuzzy AHP with Storm Water Management Model for site selection of appropriate adaptive measures", ICAIWM 2018: 20th International Conference on Adaptive and Integrative Water Management, Prague, Czech Republic, 2018.

"A study of extreme events under climate change condition in northern part of Tehran, Iran"; 2nd International Conference on Civil Engineering, Architecture, and Urban Design, Kasem-Bundit University, Bangkok, Thailand, 2017.

"Investigating the effect of using Nature-based Solutions on quantity and quality of urban floods", 3rd conference on flood engineering and management, Tehran, Iran, 2015.

"Evaluating mathematical models for velocity distribution and dip phenomenon in rectangular open channels", International conference on Environmental Science, Engineering, and Technologies, University of Tehran, Tehran, Iran.

"Estimation of runoff and SCS synthetic unit hydrograph in Taham-chay watershed", International conference of Environmental Science, Engineering, and Technologies, 2015, University of Tehran, Tehran, Iran.

"A study of velocity distribution by mathematical models in narrow sewers", International conference on Sustainable development, Strategies and Challenges, with a focus on Agriculture, Natural Resources, and Environment, and Tourism, 2015, Islamic Arts University, Tabriz, Iran.

"Discharge estimation using velocity distribution equations in open-channel cross section", International conference of sustainable development, strategies, and challenges, 2014, Tabriz, Iran.

"Investigating the relation between average and maximum velocities in open-channels with different cross-sectional shapes", 7th national conference on Environment, 2014, University of Tehran, Tehran, Iran.

"Comparison of different velocity distribution models in narrow open-channels", 8th conference of global Environment day, 2014, University of Tehran, Tehran, Iran.

"Comparison of different models for evaluating the velocity profiles in compound channels and narrow Sewers", 15th National Civil Students Conference, 2014, University of Oroumieh, Oroumieh, Iran.

"Determination of the position of maximum velocity in the cross section of narrow open-channels", 15th conference of Iran's civil engineering, 15th conference of Iran's civil engineering students, 2014, Oroumieh, Iran.

"Using entropy theory in monitoring natural channels' flow", 15th conference of Iran's civil engineering students, 2014, Oroumie, Iran.

"A study of velocity distribution in compound sewer channels", 8th national congress of civil engineering, 2014, Babol, Iran.

"Environmental pollution in relation to garbage accumulation in the vicinity of agricultural lands outside urban areas", 1st electronic conference on environment and agricultural science, 2013.

"Urban runoff and the pollution (Case study: a quarter in city of Kermanshah)", 1st electronic conference on environment and agricultural science, 2013.

"The influence of weather/climatic conditions on decision making in emergencies (Case studies: 2006 Lorestan Earthquake and 2007 snow storm in Tehran-Saveh road)", Regional conference of application of natural geography in environmental planning, 2010, Khorram Abad, Iran.

"Environmental consequences of earthquake occurrence (Case study: 2006 Lorestan Earhquake)"; International conference on Enviro-Energy; 2009, India.

"The need for recycle and reuse of storm waters in water provision", 1st international conference on water crisis, 2008, Zabol University, Zabol, Iran.

"2008 flood in Makou (Iran): Management and Challenges", 4th international conference of integrated disaster management, 2008, Tehran, Iran.

And 20 more papers.

PROFESSIONAL MEMBERSHIPS

- Member, specialized Committee of "Multi-Objective Reservoirs", (IRCOLD)
- Member, specialized Committee of "Climate Change", (IRCOLD)
- Member, Iranian Hydraulic Association
- Member, Waste Management Association

ATTENDED WORKSHOPS

Workshop, Integrated Management of Urban Water and Green Space", Tehran, Iran, 2015

Workshop, "Dams and Urban Lakes in Iran", Tehran, Iran, 2017
Workshop, "Water Economical Assessment", Tehran, Iran, 2017

Workshop, "Private and Public Participation in Iranian Water Resources Projects", Tehran, Iran, 2016.

Workshop, "El Nino, the Consequences, and solutions", Tehran, Iran, 2015

Workshop, "Social Studies in dam projects", Tehran, Iran, 2015

Workshop, "Teachers' Training", Razi University, Kermanshah, Iran, 2014

Workshop, "Teachers' Training", Kermanshah, Iran, 2013

Workshop, "United Nations, Disaster Management, and Climate Change", University of Tehran, Tehran, Iran, 2006

And 10 more workshops (plus many recent workshops during the COVID pandemic, mostly related to watershed management and flood control strategies).

LANGUAGES

- Persian: Native
- English: Fluent
- Arabic: Limited
- French: Early Intermediate (in progress)
- Italian, German: Elementary

PROFESSIONAL SKILLS

- Mapping and Spatial Data Analytics software: **Arc GIS**

- Urban Storm-Water Modelling Software: **SWMM**
- Hydraulics and Network Modeling: **HEC-RAS**
- Hydrologic Modeling: **HEC-HMS**
- Statistical Analysis Software: **SPSS**
- System Dynamics Modelling Software: **Vensim**
- Familiar with: **Climate Change Models, AutoCAD, Expert Choice, MATLAB/Python**
- Others/ General: **Microsoft Office Word/Power point/Excel**

SELECTED HONORS

- Best Presentation Award for the paper presented in the ICAIWM 2018: 20th International Conference on Adaptive and Integrative Water Management.
- 2014: Ranked 4th in National Doctoral Entrance Exam in Environmental Engineering-Water Resources.
- 2008: Among the top students of Natural Hazard Management, University of Tehran.
- 2005: Ranked 8th in National M.Sc. Entrance Exam in Natural Hazard Management.
- 2005: Ranked 2nd among all B.Sc. students of Agricultural Water Engineering, Razi University.