CURRICULUM VITAE

Personal Information

Name: Amir Hossein Salimi

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Google Scholar: Google Scholar
LinkedIn: LinkedIn

Education

2015-2018 **Ph.D**. In Water Engineering.
Université Laval, Québec, Québec, Canada.
Thiess Title: An integrated approach to forecast ice jam flooding using data driven models
Supervisors: Dr. Tadros Ghobrial & Dr. Hossein Bonakdari

2015-2018 **Master of Science**. In Water Engineering and Hydraulic Structure.
Semnan University, Semnan, Iran.
Thiess Title: Investigation of water quality parameters of Gamsayeb River and purification by using nanoparticles
Supervisors: Prof. F. Mousavi & Dr. S. Farzin

2010-2015 **Bachelor of Science**. In Civil Engineering
Razi University, Kermanshah, Iran

Research Interests

- Application of Machine learning and Time series methods in Flood (Urban and Watershed)
- Application of Machine learning and Time series methods in Meteorology
- Using Remote Sensing Methods for water and meteorology
- Using Numerical methods for modelling surface and groundwater quality and quantity
- Using Decision making methods in water and meteorology
- Investigation of Climate Change effect on on water quality and quantity by Climate change models

Research Projects

List of Selected Accomplished and Ongoing Projects

- **As Research Assistant in the Semnan University**

- Use of natural and modified zeolite nanoparticles to reduce water pollutants in Gamasiab river, Kermanshah (Personal Thesis)
- Artificial Intelligence-based Methods for Prediction of the water Quality by Matlab (3 different river in the west of Iran)
- Application of Machine Learning (ML) Method and Epanet Software for Modelling Water Distribution Network
- Leak Localization in Water Distribution Network Using Hydraulic Modelling and Search-Space Reduction (case study: Salehabadcity)

- **As Researcher in the Razi University**

- Assessment and prediction of droughts in west and northwest of Iran using artificial neural network
- The Analysis of Temporal and Spatial Changes of Daily Temperature in Iran Based on Extreme Indices
- Comparison of fuzzy wavelet neural network, fuzzy neural network and wavelet neural network techniques for rainfall-runoff modelling

- Allocation of Rain gauges by Using Grid Data Under Socio-Economic Scenarios [Preparing its report- AR in Razi University]
  -Case Study: Kermanshah Province, Iran
  -In Collaboration with: IAU Isfahan Branch

- Effect of Land Cover/Land Use and Climate change on Sediment Yield of Damghan Dam, Semnan, Iran [Preparing its report - AR in Razi University]
  -Case Study: Karaj Dam, Tehran, Iran
  -In Collaboration with: Semnan University

- Forecasting Water Quality Parameters by Time series Methods and using numerical replacing data methods [Submitting its outcome - AR in Razi University]
  -Case Study: Lake Ontario, Ontario Province, Canada
  -In Collaboration with: Laval University, Prof. Bonakdari and Dr. Ebtehaj

- A novel Multiple Attribute Decision-Making approach for assessing the effectiveness of advertising to a target audience on drinking water consumers' behaviour [Under review in Applied soft computing- AR in Razi University]
  -In Collaboration with: Indian Institute of Technology, Roorkee

Selected Publications

2023 **Salimi, A.,** Ghobrial, T., & Bonakdari, H. (2023). Comparison of the Performance of CMIP5 and CMIP6 in the Prediction of Rainfall Trends, Case Study Quebec City. Environ. Sci. Proc, 4.

2022 Noori, A., Bonakdari, H., **Salimi, A. H**., Pourkarimi, L., & Samakosh, J. M. (2023). A novel Multiple Attribute Decision-making approach for assessing the effectiveness of advertising to a target audience on drinking water consumers' behavior considering age and education level. Habitat International, 133, 102749.

2021 Noori, A., Bonakdari, H., **Salimi, A. H**., & Gharabaghi, B. (2021). A group Multi-Criteria Decision-Making method for water supply choice optimization. Socio-Economic Planning Sciences, 77, 101006.

2021 Hassanvand, M. R., **Salimi, A. H**., Kisi, O., Mohammadi, H. O., & Abouzari, N. (2021). Investigating Application of Adaptive Neuro Fuzzy Inference Systems Method and Epanet Software for Modeling Green Space Water Distribution Network. Iranian Journal of Science and Technology, Transactions of Civil Engineering, 1-13.

2020 **Salimi, A.H.,** Noori, A., Bonakdari, H., Masoompour Samakosh, J., Sharifi, E., Hassanvand, M., Gharabaghi, B. and Agharazi, M., (2020). Exploring the role of advertising types on improving the water consumption behavior: An application of integrated fuzzy AHP and fuzzy VIKOR method. Sustainability, 12(3), p.1232.

2020 **Salimi, A**., Karami, H., Farzin, S., Hassanvand, M., Azad, A., & Kisi, O. (2020). Design of water supply system from rivers using artificial intelligence to model water

hammer. ISH Journal of Hydraulic Engineering, 26(2), 153-162.

2019 Abozari, N., Hassanvand, M., **Salimi, A. H**., Heddam, S., Mohammadi, H. O., & Noori, A. (2019). Comparison performance of artificial neural network based method in estimation of electric conductivity in wet and dry periods: Case study of Gamasiab River, Iran. Journal of Applied Research in Water and Wastewater, 6(2), 88-94.

2019 **Salimi, A. H**., Masoompour Samakosh, J., Sharifi, E., Hassanvand, M. R., Noori, A., & von Rautenkranz, H. (2019). Optimized artificial neural networks-based methods for statistical downscaling of gridded precipitation data. Water, 11(8), 1653.

More publications are available at **Google Scholar**

Conference Attendance and Talks

Mar 2023 The 7th International Electronic Conference on Water Sciences

May 2019 6th National Conference on Applied Research in Civil Engineering, Architecture and Urban Management

- Oral Present: Investigation of Optimized Artificial Neural Network by Meta-Algorithms in Flood Reconciliation (Case Study: Maryam Neghar River)

Dec 2018 1st National Conference on the role of civil engineering in hazard mitigations

- Workshops: CFT structures, Visual Inspection in steel structures
- Oral Present:
  1. Removal of Sulfate from Gamsayeb Water Samples by Using Natural Nano-CLINOPTILOLITE (Oral present)
  2. Evaluation of the role of advertising on modifying the pattern of water consumption by AHP method based on trapezoidal fuzzy numbers (Oral present)
  3. Drought prediction using neural network and meta-algorithms (Case study: Kermanshah Station) (Oral present)

Nov 2017 1st International Conference on Recent progresses in Civil Engineering

- Oral Present: Removal of calcium hardness from aqueous solutions by clinoptilolite

May 2017 3rd research annual conference of architecture, Urban planning and Urban management

Oct 2016 5th National and 1st International Conference on New Materials and Structures in Civil Engineering

- Workshop: Design of LSF structures

Academic and Professional Experiences

- **Academic Experiences**

Conference Coordinator, 1st National Conference on the role of civil engineering in hazard mitigations (2018)

- Sole graduate student member, along with two faculty members. Counseled the Chairperson on major policy decisions affecting the conference and programs of it and designed conference agenda and coordinated this events.

Reviewer (2019-Present)

- Ain Shams Engineering Journal
- Water Resource management
- The 5th International Conference on Computer Science and Application Engineering (CSAE 2021)
- Applied Soft Computing Journal
- ISH Journal of Hydraulic Engineering

2016- 2017 **Teaching Assistant**, for Computational Fluid Dynamic (CFD) course: Tutoring graduate students, organizing a workshop on the application of Artificial Neural network, Semnan University, Semnan, Iran

2018- Present **Teaching Assistant**, for Climatology and Natural Hazards course: Tutoring and assisting undergraduate students, organizing 3 workshops on the Application of ANN methods in meteorology and using Decision-Making methods in climate change for graduate students, Razi University, Kermanshah, Iran

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- **Professional Experiences**

2014- 2015 **Civil Engineer Intern**, Razi University Construction Office, Kermanshah, Iran

2015- 2016 **Civil Engineer Intern,** Organization for Development, Renovation and Equipping Schools of I.R. Iran, Kermanshah, Iran

2019- Present **Board Member**, Daneshnegar Andisheh, 3rd degree private building contractors Office, Kermanshah, Iran

2019- Present **Chairman of the Board**, Mehrkam Khak Azma, 2nd degree private Concrete and Soil mechanic test Lab, Kermanshah, Iran

Computer Skills

Programming languages: MatLab [ANN, ANFIS, SVM, and Wavelet analysis]
Python

Software Skills:

MS Office Word & Excel & Power Point& Publisher
HEC-HMS/HECGEOHMS
HEC-RAS/HECGEORAS
SWMM
GMS: MODFLOW
MCDM [AHP, Topsis, Vikor, Elecer3]
MODM [MOPSO, MOGA, MOGOA, NSGA ii & iii]
Arc GIS
Terrset [LCM]
Lars-WG
GenXproTools
Qual2kw

Other Skills

Working by Climate Change Models (CMIP)
Downscaling by Lars-WG and ANN
Working with Net CDF data
Investigation of Spatial dataset by R course (will start on 10 Sep)
Trend Analysis by Mann-Kendal and Sen's Slope

Working by Drought Index (SPI, SPEI, MSDI,)
Time Series Analysis

Language Skills

- Persian and Kurdish: **Native**
- English: **Professional Working proficiency (IELTS score obtained in Jan 2022: 6.5)**
- French: **Basic Proficiency**

Honors/Awards

2014 Best Student's Association, 8th Harkat FESTIVAL, Ministry of science, research and technology, Iran
2017 Best Student's Associations Union, 10th Harkat FESTIVAL, Ministry of science, research and technology, Iran
2012 Best student's Magazine, Razi University Student's Festival
2012 Best student's Association President, Razi University Student's Festival
2013 Best student's Magazine, Razi University Student's Festival
2013 Best student's Association President, Razi University Student's Festival
2014 Manager of Harkat Festival EXPO in Razi University
2017 Manager of Harkat Festival EXPO in Razi University
2018 2nd highest-ranked graduate of the entire graduating class of a Master in Semnan university
2018 Manager of Harkat Festival EXPO in Razi University
2023 Win the bourse ESSOR

References

1. Dr. Tadros Ghobrial, Assistant professor, Department of Civil and Water Engineering, Université Laval, Quebec City, QC G1V0A6, Canada; tadros.ghobrial@gci.ulaval.ca (T.G.)
2. Professor H. Bonakdari, Associate professor, Department of Civil Engineering, University of Ottawa, Ottawa, ON K1N6N5, Canada hbonakda@uottawa.ca (H.B.)
3. Dr J. Masoom poor, Associate Professor, Department of Geography of Razi University, Kermanshah, Iran [j.mclimate27@gmail.com]