Personal details

Surname: Golian

Name: Saeed

ORCID: 0000-0001-5451-3977

Date of CV: 15/10/2020

Education

- 2006-2010 AmirKabir University of Technology Tehran, Iran

PhD in civil Engineering-Water resources Management and Hydrology

- 2003-2006 Sharif University of TechnologyTehran, Iran

Master of Science in Civil Engineering – Water Resource Management

- 1999-2003 AmirKabir University of Technology Tehran, Iran

Bachelor of Science in Civil Engineering

Research fields of interest

1- Application of GIS and RS in hydrology, different satellite and reanalysis precipitation and s moisture products

2- Application of Artificial Intelligence (AI) and data mining methods in hydroclimatology

3- Modeling and assessment of various components of hydrological cycle, e.g. rainfall, surface run and soil moisture.

4- Developing scripts in R and MATLAB for spatio-temporal analysis of hydroclimatologi variables

5- Statistical methods and Uncertainty analysis

6- Rainfall-runoff modeling and rainfall generation models.

7- Flood and drought monitoring and forecasting systems.

8- Short to long term precipitation/streamflow forecasting using climate signals.

Awards received

1- Award for Research Excellence, Shahrood University of Technology, 2015

2- Award for Research Excellence, Shahrood University of Technology, 2014

3- Ranked 200th in Iranian nation-wide Postgraduate entrance exam (among more than 100000 people), 2002

4- Ranked 481th in Iranian nation-wide university entrance exam (among more than750000 people), 1998, Iran

Employment

July 2019- present   Senior Postdoctoral Researcher, Irish Climate Analysis and Research UnitS (ICARUS), Department of Geography, Maynooth University, Ireland

Jan 2019-July 2019   Associate Professor, Shahrood University of Technology, Shahrood, Iran

2011-2018   Assistant Professor, Shahrood University of Technology, Shahrood, Iran

2003-2004   Sharif University of TechnologyTehran, Iran

- Modeling Water Surface Elevation Of Lake Urmiah using System Dynamics method.

Research experience

2019-2020   ICARUS, Maynooth University   Maynooth, Ireland
- Seasonal Hydrological Forecasting (SHF) for Irish catchments using statistical and dynamical methods.

2018-2019   Semnan Water Company   Semnan, Iran
- Member of the research and development committee

2014-2015………..Tehran Water Company………………..Tehran, Iran
- PI of a national project entitled: Estimating Evapotranspiration using remote sensing techniques

2011-2013   Tarbiat Modares University   Tehran, Iran
- Co-PI of a national project: Probabale Maximum Flood Estimation for Khersan river basin

2007-2011   Water Research Institute   Tehran, Iran
- Developing a Flood Forecasting System is Northeastern Iran, Water Research Institute, Ministry of Energy
- Integrated flood management in Kan River Basin, Water Research Institute, Ministry of Energy.

Teaching experience

2011-2019…………Shahrood University of Technology, Shahrood Iran
- Undergraduate courses: Hydrology, Groundwater Engineering, Statistics, Programming concepts, Statics,

	- Graduate courses: Advanced Hydrology, Hydrological modeling, GIS and RS concepts and their application in Water Resources, Statistical methods in Hydrology, Climate Change and Global Warming 2019-2020………..Maynooth University, Maynooth, Ireland - Co-convening master of Climate Change seminar
Languages	**English (Advanced)** **Persian (Mother Tongue)**
Book (chapters)	1- Translation: Hydrology for Water Management, By: Stephen A. Thompson, Translated by: **Saeed Golian**, Hamidreza Zahabi (2015), Shahrood University of Technology, 567pp. 2- S. Moazami and **S. Golian** , Chapter (2017) "Chapter 14 - Ensemble-Based Multivariate Sensitivity Analysis of Satellite Rainfall Estimates Using Copula Model", In Sensitivity Analysis in Earth Observation Modelling, edited by George P. Petropoulos and Prashant K. Srivastava, Elsevier, 2017, Pages 273-294, ISBN 9780128030110, http://dx.doi.org/10.1016/B978-0-12-803011-0.00014-8
Journal Papers	33- Quinn D., Murphy C., Wilby R.L., Matthews T., Broderick C., **Golian S.**, Donegan S., Harrigan Sh. (2020) Benchmarking seasonal forecasting skill using river flow persistence in Irish catchments, Hydrological Processes Journal, Accepted 32- Doulabian S, **Golian S**, Toosi AS, Murphy C (2020) Evaluating the effects of climate change on precipitation and temperature for Iran using RCP scenarios, Journal of Water and Climate Change, DOI: 10.2166/wcc.2020.114 31- Bolandakhtar MK, **Golian S** (2019) Determining the best combination of MODIS data as input to ANN models for simulation of rainfall, Theoretical and Applied Climatology 138 (3-4), 1323-1332 30- **Golian S**, Javadian M, Behrangi A. (2019) On the use of satellite, gauge, and reanalysis precipitation products for drought studies, Environmental Research Letters 14 (7), 075005 29- Hajihosseini, **Golian S**., Yazdi J. (2018) Evaluation of data-driven models to downscale rainfall parameters from global climate models outputs: The case study of Latyan Watershed, Journal of Water and Climate Change (IWA), Accepted. 28- Ghasemi A., Saghafian B., **Golian S.** (2017) System dynamics approach for simulating water resources of an urban water system with emphasis on sustainability of goroundwater, Environmental Earth Sciences Journal (Accepted)

27- Razmi A., **Golian S.** Zahmatkesh Z. (2017) Non-Stationary Frequency Analysis of Extreme Water Level: Application of Annual Maximum Series and Peak-over Threshold Approaches, Water Resources Management, DOI: 10.1007/s11269-017-1619-4.

26- Yazdi, J., **Golian, S**. and Roohi, M., 2017. Determining Checkdams Layout for Flood Mitigation Using Simulation–Optimization Approach. International Journal of Environmental Research, 11(3), pp.395-413.

25- Ghasemi A., Saghafian B, **Golian S.** (2017) Optimal Location of Artificial Recharge of Treated Wastewater Using Fuzzy Logic Approach, Journal of Water Supply: Research and Technology – AQUA, DOI: 10.2166/aqua.2017.049.

24- Karimi N., **Golian S.**, Karimi D. (2016) Monitoring deforestation in Iran, Jangal-Abr Forest using multi-temporal satellite images and spectral mixture analysis method, Arabean J. Geosciences (Springer), DOI: 10.1007/s12517-015-2250-4

23- Abdolaziz Rahmani-Kam, **Saeed Golian**, Luca Brocca, (2016) Multiyear monitoring of soil moisture over Iran through satellite and reanalysis soil moisture products , International Journal of Applied Earth Observation and Geoinformation (Elsevier), 48: 85-95 . DOI:10.1016/j.jag.2015.06.009

22- Mahmoud Zakeri Niri, Bahram Saghafian, **Saeed Golian** (2016) Analytical Derivation of Overland Travel Time Based on Diffusive Wave Solution, ASCE J. Hydrologic Engineering, 21(2): 04015065 DOI: 10.1061/(ASCE)HE.1943-5584.0001296

21- Saber Moazami, **Saeed Golian**, Yang Hong, Chen Sheng, M. Reza Kavianpour (2016) Comprehensive evaluation of four high-resolution satellite precipitation products over diverse climate conditions in Iran , Hydrological Sciences Journal, 61(2): 420-440, DOI: 10.1080/02626667.2014.987675

20- **Golian S.**, Moazami S., Hong. Y., Kirstetter E.P. (2015) Evaluating the performance of merged multi-satellite precipitation products over a complex terrain, Water Resources Management, Accepted, DOI: 10.1007/s11269-015-1096-6

19- Ruigar H., **Golian S.** (2015), Prediction of precipitation in Golestan dam watershed using climate signals, Theoretical and Applied Climatology, DOI: 10.1007/s00704-015-1377-2

18- **Golian S.**, Fallahi M.R., Behbahani M., Sharifi S., Sharma A. (2014) Real-Time Updating of Rainfall Threshold Curves for Flood Forecasting, ASCE J. Hydrologic Engineering, 20(4): 04014059, DOI: 10.1061/(ASCE)HE.1943-5584.0001049

17- B Saghafian, **S Golian**, A Ghasemi (2014) Flood frequency analysis based on simulated peak discharges, Natural Hazards, Springer, 71, 403-417.

16- **Golian S.**, Mazdiyasni O., Aghakouchak A. (2014) Trends in meteorological and agricultural droughts in Iran, Theoretical and Applied Climatology, Springer, 119(3-4): 679-688, DOI: 10.1007/s00704-014-1139-6.

15- **Golian S.**, Yazdi J., Martina L.V.M., Sheshangosht S. (2014), A deterministic framework for selecting a Flood Forecasting and Warning System (FFWS) at watershed scale, Journal of Flood Risk Management, DOI:10.1111/jfr3.12106

14- Zakeri Niri M., **Golian S.** (2014) Applying spatial-temporal NSRP model (STNSRP) for daily rainfall simulation at ungauged regions, Iranian Journal of Water and Environmental Engineering (IJWEE), (in Persian)

13- Moazami, Saber; **Golian, Saeed**; Kavianpour M. Reza & Hong Yang (2014) Uncertainty analysis of bias from satellite rainfall estimates using copula method, Atmospheric Research, 137:145–166.

12- Saghafian, B., **Golian, S.,** Khodadadi, H. (2014) Quasi-online flood forecasting downstream of dams based on rainfall thresholds, Hydrology Research, 45, 5, 519-528, DOI: 10.2166/nh.2013.048

11- Hooshyaripor F., Tahershamsi A., **Golian S.** (2014) Application of copula method and neural networks for predicting peak outflow from breached embankments, Journal of Hydro-environment Research, 8(3): 292-303, DOI: 10.1016/j.jher.2013.11.004

10- Yazdi J., Salehi Neyshabouri S. A. A., **Golian S.** (2014) A stochastic framework to assess the performance of flood warning systems based on rainfall-runoff modeling, Hydrological Processes, Wiley, 28(17): 4718-4731, DOI: 10.1002/hyp.9969 ،2013

9- Moazami, Saber; **Golian, Saeed**; Kavianpour M. Reza & Hong Yang , (2013) Comparison of PERSIANN and V7 TRMM Multi-satellite Precipitation Analysis (TMPA) products with rain gauge data over Iran, International Journal of Remote Sensing, Vol 34, No 22, 8156-8171.

8- Saghafian B., **Golian S.**, Elmi M., and Akhtari R. (2013) Monte Carlo Analysis of the Effect of Spatial Distribution of Storms on Prioritization of Flood Source Areas, Natural Hazards, 66 (2): 1059-1071. DOI: 10.1007/s11069-012-0537-2

7- Karimi N., Moridnejad A., **Golian S.**, Samani J.M.V., Karimi D. and Javadi S., (2012). Comparison of dust source identification techniques over land in the Middle East region using MODIS data, Canadian J. Remote Sensing, DOI: 10.5589/m12-048

6- Ghalkhani Hossein; **Golian Saeed**; Saghafian Bahram; Farokhnia Ashkan & Shamseldin Asaad, "Application of surrogate artificial intelligent models for real-time flood routing", Water and Environment Journal, DOI: 10.1111/j.1747-6593.2012.00344.x, Wiley, 2012

5- **Golian Saeed**; Saghafian Bahram; and Farokhnia Ashkan،(2012) Copula-based interpretation of continuous rainfall-runoff simulations of a watershed in Northern Iran ، Canadian Journal of Earth Sciences, 49 (5): 681-691, NRC Research Press, DOI:10.1139/e2012-011 ، 2012

4- Mahmood Zakeri Niri, Bahram Saghafian, **Saeed Golian**, Tommaso Moramarco, Abolfazl Shamsaee (2011) "Derivation of Travel Time Based on Diffusive Wave Approximation for the Time-Area Hydrograph Simulation", ASCE J. Hydrologic Engineering, DOI:10.1061/(ASCE)HE.1943-5584.0000399

3- **Golian Saeed**, Saghafian Bahram, Elmi Mohammad and Maknoon Reza , (2011) "Probabilistic rainfall thresholds for flood forecasting: Evaluating different methodologies for modeling rainfall spatial dependence", Hydrological Processes, 25(13), 2046-2055, DOI: 10.1002/hyp.7956

2**- Golian Saeed**, Saghafian Bahram and Maknoon Reza (2010) Derivation of probabilistic thresholds of spatially distributed rainfall for flood forecasting, Water Resources Management, Vol 24, No 13, pp. 3547-3559

1- **Golian S.**, Saghafian B., and Sheshangosht S. (2010) Comparison of classification and clustering methods in spatial rainfall pattern recognition at Northern Iran, Theoretical and Applied Climatology, Vol 3, No 110, pp. 319-329

Conference Papers	12- Quinn, D., Murphy, C., Wilby, R.L., Matthews, T., Broderick, C., **Golian, S.**, Donegan, S. and Harrigan, S., 2020, May. Spatial and temporal patterns in seasonal forecast skill based on river flow persistence in Irish catchments. In EGU General Assembly Conference Abstracts (p. 17646). 11- **Golian, S.**, Razmi, A., Mardani, H.A. and Zahmatkesh, Z., 2020, May. Nonstationary Bi-Variate Frequency Analysis of Extreme Sea Level and Rainfall Under Climate Change Impacts: South Carolina Coastal Area. In EGU General Assembly Conference Abstracts (p. 3098). 10- **Saeed Golian**, Ali Razmi, Heydar Ali Mardani, and Zahra Zahmatkesh (2020) Nonstationary Bi-Variate Frequency Analysis of Extreme Sea Level and Rainfall Under Climate Change Impacts: South Carolina Coastal Area, EGU General Assembly, Vienna, Austria 9- Soroosh Sharifi, Philippe Ho, **Saeed Golian** (2015) Evaluating the use of different distance measures in statistical downscaling of climate parameters using the K-NN method, 36th IAHR World Congress, 28 June-3 July, Amsterdam, Netherlands. 8- Saghafian, B., Akhtari, R., Elmi, M., **Golian, S.** (2011) Monte Carlo Analysis of Spatial Distribution of Rainfall on Relocation of Watershed Flood Source Areas, 1st

	International Sustainable Watershed Management (SuWaMa) Conference, 19-23 September 2011, Istanbul, Turkey .

7- Fallahi, Mohammad Reza; Varvani, Hadi; **Golian, Saeed**, Rainfall prediction using regression tree for flood forecasting, 5th National Conference on Watershed Management and Soil and Water Resources Management, Kerman, Iran, 2011

6- Salarian Narjes, **Golian Saeed** and Ahmadi Ahmad, Investigating the effects of checkdam construction in mitigation of flood hydrograph characteristics using hydrological modeling in north-west of Tehran, Iran, 5th International Conference on Flood Management (ICFM5), Japan, 2011

5- Fallahi, M.R., Behbahani, S.M. and **Golian, S.** (2011), Investigating the Effects of Rainfall Time Distribution on Rainfall Thresholds for Flood Forecasting, 5th International Conference on Flood Management (ICFM5), 27-29 September, Tokyo, Japan

4- **Golian, S**. Moazami, S. Yazdi, J. Sheshangosht, S. , "An IFM-based flood damage reduction: A small study area in Iran", International conference in Chemistry and Chemical Engineering , Kyoto, Japan, 2010

3- Martina MLV, **Golian Saeed**, Todini Ezio, "Rainfall thresholds for flood forecasting in Italy: a Bayesian and Copula based methdology", EGU General Assembly , Vienna, Austria, 2010

2- **Saeed Golian**, Bahram Saghafian, Reza Ahmadi and Ashkan Farokhnia, "Copula-Based Interpretation of Continuous Rainfall-Runoff Simulations", Joint International Convention of 8th IAHS Scientific Assembly and 37th IAH Congress on Water: A vital resource under stress – How Science can help, September 6-12, Hyderabad, India, 2009

1- Bahram Saghafian, **Saeed Golian** and Reza Maknoon, "Rainfall Threshold Extraction for Flood Forecasting using Monte Carlo Simulation", Joint International Convention of 8th IAHS Scientific Assembly and 37th IAH Congress on Water: A vital resource under stress – How Science can help, September 6-12, Hyderabad, India, 2009 |
| **Supervised Msc and Ph.D Theses** | **Msc theses**

Jordan Cooney (2020), Investigation into the potential accuracy of satellite and reanalysis precipitation products at drought monitoring and detection over Ireland, Maynooth University, Ireland

Roozbeh Ahmadi (2019), Investigation of time and location of dust events in southwestern Iran using satellite remote sensing data, Shahrood University Of Technology |

Hesam Akbari Ghuchani (2019), Evaluation of land subsidence using time series radar interferometry data, Shahrood University Of Technology

Saeed Saboori Noghabi (2018), Assessment of water stress to optimize water resources distribution using remote sensing (case study Mashhad plain), Shahrood University Of Technology

Vahid Matinnia (2018), Investigation of the trend of snow cover surface changes in Lake Urmia basin, Shahrood University Of Technology

Ramtin Fasanghari (2018), Low Impact Development Approach In Urban Flood Management Considering Uncertainty Influence Using Fuzzy Logic, Shahrood University Of Technology

Shahab Doolabian (2017), "Evaluating the effects of Climate Change on Precipitation and Temperature over Different Parts of Iran using AR5 scenarios" , Shahrood University of Technology, Shahrood, Iran

Mohammad Bazrafshan Moghaddam (2016), "Evaluation of Climate Change's Effect on Precipitation and Temperature in Different Parts of Iran", Shahrood University of Technology, Shahrood, Iran

Reza Haji Hosseini (2016), "Downscaling of hydrological parameters by GCM outputs and data-driven models (Case Study: Latyan Dam Watershed)", Shahrood University of Technology, Shahrood, Iran

Mohammad Roohi (2016), "Determining the optimal Location of check dams in sub watersheds", Msc Thesis, Shahrood University Of Technology

Negar Ghasemi (2016), "The effect of general circulation climate models (AOGCM) On how to allocate water resources Case study: Latyan Dam watershed, east of Tehran, Iran)" , Shahrood University of Technology, Shahrood, Iran

Saman shabani (2016), "An investigation into the effect of the pipe bending angle in the pressure drop of vane elbow pipes", Shahrood University of Technology, Shahrood, Iran

Abdolaziz Rahmani kam (2015), "Soil moisture routing using remote sensing products" Pezhman Yavari (2015) "Assessment of water resources allocation scenarios Case study: Latyan Dam watershed, east of Tehran, Iran))", Shahrood University of Technology, Shahrood, Iran

Mohammad hosien Khadir (2015), "Evaluation of watershed runoff under climate change scenarios (Case study of Talar watershed, Mazandaran)" , Shahrood University of Technology, Shahrood, Iran

Afshin Shahriari (2015), "Assessment the Effects of Climate Change on Surface Water Resources of Golestan Dam by Using SWAT Model", Shahrood University of Technology, Shahrood, Iran

Mohammad Sharekian (2015), "Integrated water resource management in Neyshabur plain using, WEAP", Shahrood University of Technology, Shahrood, Iran

Sajad okhovat (2015), "Snowmelt runoff modeling with SRM and by GIS and RS(Case study of Lar Dam basin)" , Shahrood University of Technology, Shahrood, Iran

S. Mousavi (2015), "Evaluation of satellite-based snow algorithms in Ilam Province", Shahrood University of Technology, Shahrood, Iran

Razieh Pakkhesal (2015), "Compilation optimum model of Tehran – Karaj's Groundwater monitoring network by hybrid geostatistical model", Shahrood University of Technology, Shahrood, Iran

Hossein Ruigar (2014), "Rainfall and Discharge forecasting using Climatic Signals in the upstream of Golestan Dam", Shahrood University of Technology, Shahrood, Iran

Saeed Salehinia (2014), " Estimates of evapotranspiration using SEBAL satellite algorithm and compare it with the results of the lysimeter (Case Study: Alborz province, Hashtgerd region)", Shahrood University of Technology, Shahrood, Iran

M.R. Fallahi (2012), "Impact of updating rainfall threshold curves on modifying flood forecasting and warning", University of Tehran, Tehran, Iran.

N. Salarian (2011), "Investigating the effects of checkdam construction on mitigating flood effects", Shahrood University of Technology, Shahrood, Iran

Ph.D theses

A. Razmi, Multivariate regional frequency analysis of sea water level using nonstationary copula, Shahrood University of Technology (2020).

S. Moazami Goodarzi, Assessing performance of different Satellite Rainfall Estimate algorithms (SREs) over Iran, K.N.T university, Tehran, Iran, 2013.

Editorial board/Reviewer	**Editorial Board**
	
	    Hydrology (MDPI)
	
	Reviewer
	
	    Remote Sensing (MDPI)
	
	    Water Resources Management (Springer)
	
	    Water Management (ICE)
	
	    Theoretical and Applied Climatology (TAAC) (Springer)
	
	    Natural Hazards and Earth systems Sciences (NHESS)
	
	    Hydrology and Earth System Sciences (HESS)
	
	    Journal of Flood Risk Management (Wiley)
	
	    Natural Hazards (Springer)
	
	    Journal of Hydrologic Engineering (ASCE)
	
	    Journal of Hydrology (Elsevier)

Skills	1- Advanced scripting skills in MATLAB and R 2- Application of GIS and RS in hydroclimatology, using different satellite and reanalysis precipitation and soil moisture products for Hydroclimatology related studies. 3- Application of Artificial Intelligence (AI) in Hydrology and Water resources 4- Expert in working with big geospatial datasets, i.e. NetCDF, GRIB and other data formats 5- Climate change concepts and its impact assessment 6- Modeling and assessment of various components of hydrological cycle, e.g. rainfall, surface runoff and soil moisture. 7- Rainfall-runoff modeling and rainfall generation models (e.g. HEC-HMS, TOPKAPI, SWAT, Watershed Modeling System (WMS) 8- Flood forecasting and warning systems. 9- Drought analysis, monitoring and forecasting. 10- Uncertainty analysis of hydrological models 11- Short to long term precipitation/streamflow forecasting using climate signals.