**CURRICULUM VITAE**

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| * **PERSONAL DATA**   C:\Users\Espinas\Desktop\2017-01-24 13.30.33.jpg  Name: Moahmmad Ali Ghorbani  Academic Rank: Associate Professor    Born: 26 Jan 1974 in Tabriz, Iran  Languages: Azeri and Persian (native), English (good)  Address: Water Engineering Department, Faculty of Agriculture,  University of Tabriz, Tabriz , Iran  Phone: +98-(41)-33392786  Fax: +98-(41)-33345332  E-mail: [Ghorbani@tabrizu.ac.ir](mailto:Ghorbani@tabrizu.ac.ir)  <https://www.researchgate.net/profile/Mohammad_Ali_Ghorbani2>  Martial Status:Married |
| * **EDUCATION**   2000-2006 PhD in Hydrology and Water Resources Engineering, University of Tehran ,Tehran, Iran  Dissertaion: Application of Catastrophe theory in rainfall-raunoff modeling  1997-2000M.Sc. in Irrigation Structures, University of Tehran ,Tehran, Iran  Thesis: Regional flood frequency analysis  1993-1997B.Sc. in Irrigation Engineering, University of Tabriz,Tabriz, Iran |
| * **HONORS AND AWARDS**   1. First rank in nation-wide MSc. entrance exam.  2. M.Sc. Degree, First Class Honor , University of Tehran.2000  3. Ph.D. Degree, First Class Honor , University of Tehran.2006.  4. Prize Winner and Distinguished Researcher of Faculty of Agriculture, Univeristy of Tabriz , 2011.  5.Prize Winner and Distinguished Researcher all over Agriculture and Veterinary Medicine Faculties of University of Tabriz, 2011.  6.Prize Winner and Distinguished Researcher of Faculty of Agriculture, Univeristy of Tabriz , 2016.  7.Prize Winner and Distinguished Researcher all over Agriculture and Veterinary Medicine Faculties  of University of Tabriz, 2016. |
| * **MEMBERSHIP IN SCIENTIFIC SOCIETY**   1) Iranian Hydraulic Association, Member, National, 2005-Present  2) Iranian Watershed Management Association, Member, National, 2005-2010.  3) European Geosciences Union (EGU) 2006-2012. |
| * **PROFESSIONAL EXPERIIENCE**   Nov. 2004 - Jun. 2010 Assistant Professor University of Tabriz , Tabriz, Iran  Jul. 2010 – Present Associate Professor University of Tabriz , Tabriz, Iran |
| * **RESEARCH INTERESTS**   Hydrology, Hydrometeorology, Hydrological modeling, Chaos and Catastrophe theory, Artificial intelligence techniques |
| * **INTERNATIONAL JOURNAL PUBLICATIONS**   - G**horbani, M.A**., Shamshirband S., Zare Haghi, D., Azani, A., (2017). “Application of firefly algorithm-based support vector machines for prediction of field capacity and permanent wilting point “.Soil & Tillage Research . *In Press*.  1.Delafrouz, H., Ghaheri, A., **Ghorbani, M.A**., (2017) “A novel hybrid neural network based on phase space reconstruction technique for daily river flow prediction ". Soft Comupting .(In press).  2.Kashani, M.H., **Ghorbani, M.A.**, Dinpashoh, Y., Shahmorad, S. Kundzewicz, Z.W., (2017) " Comparative study of different wavelets for developing parsimonious Volterra model for rainfall- runoff simulation " . Water Resources. (In press).  **3.Ghorbani, M.A.**, Asadi, H., Makarynskyy, O., Makarynska D., Mundher Yaseen Z., (2017). “Augmented chaos-multiple linear regression approach for prediction of wave parameters” . 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A.,** AhmadZadeh, H., Isazadeh, M., Terzi, O.,(2016)"A comparative study of artificial neural network (MLP, RBF) and support vector machine models for river flow prediction " Environmental Earth Sciences,75.  **8.Ghorbani, M. A.,** Khatibi, R., FazeliFard, M. H., Naghipour, L., Makarynskyy, O., (2016)"Short-term wind speed predictions with machine learning techniques" Meteorology and Atmospheric Physics, 128.  **9.Ghorbani, M. A.,** Khatibi, R., Goel, A., FazeliFard, M. H., Azani, A.,(2016)"Modeling river discharge time series using support vector machine and artificial neural networks " Environmental Earth Sciences,75.  **10.Ghorbani, M.A.,** Asadi, H., Makarynskyy, O., Makarynska, D., Yaseen, Z.M.,(2016)" Augmented chaos-multiple linear regression approach for prediction of wave parameters " Engineering Science and Technology, an International Journal.  11.Kashani, M.H., Daneshfaraz, R., **Ghorbani, M.A.,** Najafi, M.R., Kisi, O., (2015) "Comparison of different methods for developing a stage-discharge curve of the Kizilirmak River", Journal Flood Risk Management, 8, 71-86.    **12.Ghorbani, M.A.,** Singh, V.P., Sivakumar, B., Kashani, M.H., Atre, A.A., Asadi, H.,(2015)" Probability distribution functions for unit hydrographs with optimization using genetic algorithm " Applied Water Science.  **13.Ghorbani, M.A.,** Aalami, M.T., Naghipour, L., (2015)" Use of artificial neural networks for electrical conductivity modeling in Asi river " Applied Water Science.  14.Nemati, S., Fazelifard, M.H., Terzi, O., **Ghorbani, M.A.,** (2015)" Estimation of dissolved oxygen using data-driven techniques in the Tai Po River, Hong Kong " Environmental Earth Sciences,74.  15.Jani, J., **Ghorbani, M.A.,** Shamsai, A., (2014)"Dynamics of Monthly Rainfall In Ramsar", Journal of Applied Science and Agriculture,9(4), 1371-1378.  16.Kashani, M. 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Bilgili, M., (2013)"Relative importance of meters affecting wind speed prediction using artificial neural networks", theory Appl Climatol, 114,107-114.    21.Hosseini, S.H., Jafari, J., **Ghorbani, M.A.,**(2013) "Sensitivity of the FAO-Penman Montecito Reference Evapotranspiration Equation to Change in Climatic Variables in the North-Western Iran", Research in Civil and Environmental Engineering, 1, 28-40.  **22.Ghorbani, M.A.,** Hasanpour, M., Zeynali, S., (2013)"Development of synthetic unit hydrograph using probability models ", Research in Civil and Environmental Engineering, 1, 54-66.    23.Aghvami, E., Abbaspour, A., **Ghorbani, M.A.,** Salmasi, F., (2013) "Estimate of Channels Seepage Using Seep/w and Evolutionary Polynomial Regression (EPR) modeling (Case Study: Qazvin and Isfahan Channels) Journal of Civil Engineering and Urbanism, 3(4), 211-215.    24.Khatibi, R., Naghipour, L., **Ghorbani, M.A.,** Smith, M.S., Karimi, V., Farhoudi, R., Delafrouz, H., Arvanaaghi, H.,(2013)" Developing a Predictive tro pospheric ozone model for Tabriz " Atmospheric Environment,68.  **25.Ghorbani, M.A.,** Hosseini, H., Fazelifard, M.H., Abbasi H.,(2013)"Sediment load estimation by MLR,ANN.NF and sediment Rating Curve (SRC) in Rio Chama River", Journal of Civil Engineering and Urbanism, 3(4), 136-141.  26.Khatibi, R., Naghipour, L., **Ghorbani, M.A.,** Aalami, M.T.,(2013)"Predictability of relative humidity by two artificial intelligence techniques using nosisybdata from two Californian gauging stations", Neural Comput & Applic , 23,2241-2252.    27.Domenico, M.D,. **Ghorbani, M.A.,** Makaraynskyy, O,. 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(2013)" Chaotic Analysis and Prediction of River Flow" Journal of Hydraulic Structures, 1(1).  **30.Ghorbani, M.A.,** Pourzangbar, A., (2012) "Determination of the Most Important parameters on Scour at Coastal Structures", Journal of Civil Engineering and Urbanism, 2(2) ,68-72.    **31.Ghorbani, M.A.,** Daneshfaraz, R., Aravangi, H., pourzangbar, A., (2012)"Local Prediction in River Discharge Time Series", Online Journal of Civil Engineering and Urbanism, 2(2) ,51-55.    **32.Ghorbani, M.A.,** Jabbari, H., Asadi, H., Yousefi, P., (2012)"Application of Chaos Theory and Genetic Programming in Runoff Time Series", International Journal of Structural and Civil Engineering, 1(2).  33.Khatibi, R., Sivakumar, B., **Ghorbani, M.A.,** Kisi, O,. 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Tadayoni, M., Valaee, A., (2015)"Study of temporal and spatial distribution of rainfall city of Tabriz using cluster analysis" Journal of geographic space,50(15),59-81.  13.Hosseini,S.H., **Ghorbani, M.A.,** Massah Bavani, A.R.,(2015)"Raifall-Runoff Modelling under the Climate Change Condition in Order toProject Future Streamflows of Sufichay Watershed" Journal of Watershed Management Research,11(6),1-14..  12.Hasanpour Kashani, M., **Ghorbani, M.A.,** Dinpazhouh, Y., Shahmorad, S., (2015)"Rainfall-Runoff Simulation in the Navrood River basin using Truncated Volterra Model and Artificial  Neural Networks" Journal of Watershed Management Research,12(6),1-10.  13.Gharibdost, M., **Ghorbani, M.A.,** Fazelifard, M.H., Asadi, H., (2015)" Analysis of power spectrum (Spectrum) to assess the scale of monthly precipitation of 33 rain gauges" Journal of Iran Water,9(1),49-58.  **14.Ghorbani, M.A.,** Dehghani, R., (2015), "Application of Bayesian Neural Networks, Support Vector Machines and Gene Expression Programming Analysis of Rainfall - Runoff Monthly (Case Study: Kakarza River)"Journal of Science and Engineering Irrigation,39(2),125-138.  15.Sanikhani, H., Dinpashoh, Y., **Ghorbani, M.A.,** (2015)" Baranduz-Chay River Flow Modeling Using the K-Nearest Neighbor and Intelligent Methods"" Journal of Soil and Water Knowledge,25(1),219-233.  16.Soofirahimi, M., Fakheri fard, A., Dinpashoh, Y., Asadi, E., **Ghorbani, M.A.,** (2015)" Regional Analysis of the Maximum Annual River Flow Data in East Azarbaijan Province Rivers Using the L-moments Method " Journal of Soil and Water Knowledge,25(3),253-265.  17.Jahedi Sfanjani, N., **Ghorbani, M.A.,** (2015)" The trend analysis of rainfall and discharge stations Bigelow and Sami Nagorno-hand basin", Journal of Geography and Planning, 52(19), 43-63.  **18.Ghorbani, M.A.,** Azani, A., Mahmoudi Vanolya, S.,(2015)" Rainfall-Runoff Modeling Using Hybrid Intelligent Models ", Journal of Iran-Water Resources Research,11(2),146-150.  **19.Ghorbani, M.A.,** Hosseini, S.H., Kashani, M.H., Abbasi, H., (2015)" Evaluation of Alavian Reservoir Operation Performance under the Condition of Future Climate Change " Journal of Civil and Environmental Engineering,45(2),59-72.  20.Jani, R., **Ghorbani, M.A.,** Shamsaee, R., (2015)" Anzali monthly precipitation analysis using chaos theory in climate change " Iran Water Research Journal,9(1),29-39.  21.Alami, M.T., Malekani, L., **Ghorbani, M.A.,** (2015) " Rainfall-runoff modeling Lighvanghai using cell Automatic model " Journal of quantitative geomorphology,4(3),60-73.  22.Alizadeh, N., **Ghorbani, M.A.,** Darbandi,S., (2015)" SofiChay residual simulate river sediment deposition during floods " Journal of Science and Technology of Agriculture and Natural Resources, Soil and Water Science, 71(19),323-334.  23.Fathian, F., **Ghorbani, M.A.,** Dehgan,Z., (2014)"Investigation and Comparison of Hurst Exponent Estimation Methods in Trend and Seasonality Analysis of Hydro-Climatic Variables in Urmia Lake Bain (Case Study: Aji Chai Sub-basin)" Journal of water and soil,28(1),219-229.  24.Mohajeri, F., Sagibiyan, M., **Ghorbani, M.A.,** Darbandi,S., Asadi, E., (2014)," The effect of regional precipitation and runoff basin point Balkhlouchay " Journal of geographic space,48(14),129-149.  .  25.Zareamini, F., **Ghorbani, M.A.,** Darbandi,S., (2014)" Assessment of Genetic Programming in estimating soil temperature" Journal of geographic space,47(14),19-38.    26.Hosseinpour, A., **Ghorbani, M.A.,** Darbandi, S.,(2014)" Evaluation of heuristic methods to calculate the suspended sediment discharge Ahar-chai " Journal of geographic space,46(14),89-108.    **27.Ghorbani, M.A.,** Hasanzadeh, Y., Asadi, H., Yousefi, P., (2014)" Capability of transfer function model to estimate the size of the UH " Journal of Iran Water, 14(8),39-45.  28.Servati, M., Jafarzadeh, A.A., **Ghorbani, M.A.,** Shahbazi, F., Davatgar, N., (2014)," Land Suitability Evaluation for Alfalfa in Khajeh Region Using the Parametric Square Root method and Fuzzy Set Theory " Journal of Soil and Water Knowledge,24(2),93-105.    **29.Ghorbani, M.A.,** Asadi, H., Jabbari Khamneh, H., Farsadizadeh, D.,(2014)" Derivation of Instantaneous Unit Hydrograph (IUH) using the Shannon Entropy Theory" Journal of Watershed Management Research,10(5),30-42.  30.Mokarian, R., Fakheri Fard, A., Asadi, H., **Ghorbani, M.A.,** (2014)" Rainfall-Runoff Simulation Using Grey System Theory (Case Study: Lighvan Watershed)" Journal of Soil and Water Knowledge,24(2),121-133.    31.Servati, M., Jafarzadeh, A.A., **Ghorbani, M.A.,** Shahbazi, F., Davatgar, N., (2014)," Comparison of the FAO and Albero Models in Prediction of Irrigated Wheat Production Potentials in the Khajeh region " Journal of Soil and Water Knowledge,24(3),1-14.    32.Shafaei, M., Fakheri Fard, A., Darbandi,S., **Ghorbani, M.A.,** (2014)" Comparing Filtering of Wavelet Decomposed Waves with Moving Averages (Case Study: Vanyar Station in Ajichay Basin)" Journal of Soil and Water Knowledge, 24(3),191-203.  33.Zahiri, A.R., Eghbali, P., **Ghorbani M.A,** (2013)“ Flow discharge modeling in flooded rivers by using genetic programming", J. of Water and Soil Conservation, 19(4),67-83.  34.Ghobadian, R., **Ghorbani, M.A.,** Khalaj, M., (2013)" Comparison of Performance of Dynamic Wave and Gen Expression Programming Methods to River flood routing", Journal of Water and Soil,27(3),592-602.  35.Shafaei, M., Fakhei fard, A., darbandi, S., **Ghorbani, M.A.,** (2013)" Prediction Daily Flow of Vanyar Station Using ANN and WaveletHybrid Procedure" Journal of Irrigation and Water, 14(4),113-128.  36.Kavekar, SH., **Ghorbani, M.A.,** Ashraf zadeh, A., Darbandi,S., (2013)" Simulation of water level fluctuations with the use of GEP ", Iran. 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| * **CONFERENCE PAPERS**   More than 60 papers |
| * **TEACHING**   Advance topic in Hydrology for PhD students 2010- Present  Optimization in Soil science PhD students 2014-2015  Geostatistics for PhD students 2014-2015  Engineering Hydrology for M.Sc students 2008-Present  Adanced technologies for M.Sc students 2007-Present  Surface Water Hydrology for B.Sc. students 2002-2004  Computer Programming for B.Sc. students 2005-2010  Hydrometeorology for B.Sc. students 2005-2010. |
| * **SUPERVISING OF PhD & M.Sc. STUDENTS**  |  |  |  |  | | --- | --- | --- | --- | | **Title of the Thesis** | **Name of the Candidate** | **Date of Submission** | **Degree** | | * Forecasting monthly rainfall using integrated support vector machine with firefly algorithm coupled with phase-space reconstruction | Hakime Asadi | 2017 | Ph.D | | * Classification of annual evaporation of Iran Meteorological stations using cluster and Fuzzy cluster analysis, and Kohonen artificial neural networks. | Reza Mokarian  (Department of Water Sciences & Engineering, Science and Research Branch, Islamic Azad University, Tehran, Iran.) | 2016 | Ph.D | | * Evaporation modeling using hybrid Artificial Intelligent methods | Mehdi Akbari | 2017 | Ph.D | | * Multi Model data fusion for groundwater modeling | Sahab Kavekar | 2017 | Ph.D | | * Application of Mutual information and Gamma test for Input selection of Support Vector Machine Regression Model in Sofichay River flow Estimation | Fateme Akhoni Pourhosseini | 2016 | M.Sc. | | * Evaluation of Satellite-based Precipitation Estimation Using Gauge Observations over Urmia Lake Basin | Erfan Jahangir | 2016 | M.Sc. | | * Evaluation of climate change impacts on inflow to Urmia Lake Using SWAT Model (Case study: Aji Chay Watershed) | Haniyeh Samadluyi | 2016 | M.Sc. | | * Impact of climate change on Lalyan reservoir inflow rate | Mohsen Ahmadi | 2016 | M.Sc. | | * Estimation of Zarineh Roud River Discharge using Hybrid Artificial intelligence Models | Mohammad Isazadeh | 2015 | M.Sc. | | * Suiable site selection for sub surface dams construction using GIS/RS | Hassan Khodaei | 2015 | M.Sc. | | * Prediction of river flow with using the nearest neighbor algorithm based on probabilistic indicator complexity and collective approach | Hadi Sanikhani | 2015 | Ph.D | | * Efficiency of Nakagami Distribution Function for Deriving Unit Hydrograph in sufi-chay Basin | Fateme Sohrabi | 2014 | M.Sc. | | * Rainfall-Runoff Simulation Using Support Vector Machine in Soufichay River Basin | Atefeh Azani | 2014 | M.Sc. | | * Optimization of Spatial Distribution for Rain Guage using ARC-GIS (Case study : Maharloo- Bakhtegan Basin) | H.Momen Roomiani | 2014 | M.Sc. | | * Comparasion parametric,MicroLEIS,Fuzzy Set the Theory and Analytical Hierarchy Process for land suitability evalution of some crops in KhajehRegion | Moslem Servati Khajeh | 2013 | Ph.D | | * Analysis of rainfall-runoff process using chaos theory under climate change condition | Rasoul Jani | 2013 | Ph.D | | * Classification of annual temperature and precipitation of Iran Meteorological stations using Fuzzy cluster analysis | Sorour Pourbabak | 2013 | M.Sc. | | * Disaggregation of Lighvan Watershe's Rainfall Using Microcanonical Cascade Model | Mohammad Hasn Fazelifard | 2012 | M.Sc. | | * Spatio-temporal estimation of groundwater table fluctuations using geostatistics and intelliigent models | Abouzar Salehi | 2012 | M.Sc. | | * Impact of climate change on Rainfall-Runoff Processes of Sofichaii River Watershed Using Hidden Markov Model | Leila Naghipour | 2012 | M.Sc. | | * The Evaluation of Morphologic Changes of River in Drainage Basins in Response to landuse changes (Case study: Lighvan Chay Catchment) | Somayeh Khaleghi | 2014 | Ph.D | | * Temporal Disaggregation of Rainfall and Derivation of Instantaneous Unit H ydrograph using Entropy Theory | Hakimeh Asadi | 2012 | M.Sc. | | * Water resources planning and management using Weap model (Case study: Marand Study Area) | Saeed Teymouri | 2011 | M.Sc. | | * Estimation of Rivers Flow using Chaos Theory and Genetic Programming at Different Time Scales | Farnoosh Moradizadeh Kermani | 2010 | M.Sc. | | * Rainfall-runoff modeling using genetic programming and stochastic differential equations in the Lighvan watershed | Ali Soltani | 2010 | M.Sc. | | * Application if Grey system Theory for flood forecasting in the Lighvan River Basin | R.Mokarian | 2010 | M.Sc. | | * River flow forecasting usinng Wavelet analysis and comparison with time series model (Case study: Lighvan Chay river) | Maryam Rostami | 2010 | M.Sc. | | * Spatial and temporal estimation of suspended sediment load in Ajichai river watershed using Artificial Neural Network and Kriging and Cokriging models. | Samira Tolouei | 2008 | M.Sc. | | * Wate Quality Analysis Simulation in Urmia Lale Shaharchay River Using the WASP Model | Majid Asadi Lour | 2007 | M.Sc. | |
| * **REVIEWING**   Journal of Hydrology, Theoretical and Applied Climatology, Water Resouces Management, Soft Computng, Neural Computing & Applications, KSCE Journal of Civil Engineering, Environmental Earth Sciences, International Journal of Sediment Research , [Atmospheric Pollution Research](http://www.google.com/url?sa=t&rct=j&q=&esrc=s&frm=1&source=web&cd=1&cad=rja&uact=8&ved=0CCIQFjAAahUKEwieyr2iw9zGAhWFchQKHUHAAZE&url=http%3A%2F%2Fwww.atmospolres.com%2F&ei=7P-lVZ6kAoXlUcGAh4gJ&usg=AFQjCNHyA2a91gR1Zt9SdYvXGkxTV2TZ4Q),[Computers & Geosciences .](http://www.google.com/url?sa=t&rct=j&q=&esrc=s&frm=1&source=web&cd=1&cad=rja&uact=8&ved=0CB0QFjAAahUKEwi8_ITXw9zGAhXMwBQKHUrdBuU&url=http%3A%2F%2Fwww.journals.elsevier.com%2Fcomputers-and-geosciences%2F&ei=WgCmVbznD8yBU8q6m6gO&usg=AFQjCNHtWzfMRGKShOI2EESAGl0hVIkUnw&bvm=bv.97653015,d.bGg) |
| * **BOOK CHAPTERS**   **Ghorbani M.A**., Khatibi R., Asadi H., Yousefi P., “Inter-Compariosn of an Evolutionary Programming Model of Suspended Sediment Time-Series with Other Local Models”.2012. InTech publisher.Chapter 12. : 255-284. |
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| * **SKILLS & QUALIFICATIONS**   **Teamwork:** I have successfully undertaken various team projects within both academic and non-academic environments.  **Computer Skills:** Matlab, *Mathematica*, Microsoft Office , Fortran, Spss, Minitab, Geostatistics **Operating Systems:** Windows |
| * **BOOKS:(in Persian)** * *Mathematica* for water Engineering * Application of Water Engineering Softwares |
| * **RESEARCH ACTIVITY** * Four projects with East Azerbaijan Regional Water Authority, Lorestan State Regional Water Authority, Zanja State Regional Water Authority, Ardebil State Regional Water Authority. * Two projects with University of Tabriz, Tabriz, Iran. |