

Curriculum vita



Roohollah Noori

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University of Tehran
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Number of Publications: 76 Total Citation: 1400 H-Index: 20

Professional Experience

Assistant Professor, Graduate Faculty of Environment, University of Tehran	2013 - at present
Visiting Professor, Department of Water Resources and Environmental Engineering, University of Oulu, Oulu, Finland (Bjorn Klove)	Fall 2018
Visiting Professor, Department of Hydraulic Engineering, Tsinghua University, Beijing, China (Fuqiang Tian)	Summer 2018
Visiting Professor, Division of Water Resources Engineering, Lund University, Sweden (Ronny Berndtsson)	Summer 2017
Visiting Professor, Department of Civil and Environmental Engineering, Seoul National University, South Korea (Il Won Seo)	Summer 2015
Visiting Professor, Department of Civil and Environmental Engineering, National Chiao Tung University, Taiwan (Hund Der-Yeh)	Summer 2014

Education

<i>PhD</i> : Environmental-Water Engineering, University of Tehran, Tehran, Iran Thesis: <i>Development and Application of Two-Dimensional Numerical Reduced-Order Model to Simulate Nitrate in the Reservoirs</i> Primary Advisor: Abdulreza Karbassi	2012
<i>MSc</i> : Civil & Environmental Engineering, Tarbiat Modares University, Tehran, Iran Thesis: <i>Municipal Wastewater Treatment Using Moving Bed Bio-Reactor</i> Primary Advisor: Bitay Ayati	2008
<i>BSc</i> : Irrigation & Drainage Engineering, Shahid Bahonar University of Kerman, Iran Thesis: <i>Conjunctive Use of Ground Water and Surface Water in Coastal Zones</i> Primary Advisor: Mohammad Bagher Rahnama	2006

Research Interest

- Environmental-Water Resources Systems Analysis
- Rivers and Reservoirs Management
- Hydrological Modeling (Numerical & Data-Driven Models)
- Assessment of Water Quality Monitoring Networks

Research Projects

- I. Inflow Prediction into the Alavian Dam (PI)
- II. Karoon River Water Quality Management (PI)
- III. Sefidroud River Water Quality Management (PI)
- IV. Karkheh Dam Reservoir Eutrophication Modeling and Management (PI)
- V. A Reduced-Order Water Quality Model for the Sabalan Dam Reservoir (PI)
- VI. A modified bootstrap approach for quantification of predictive and parametric uncertainty in streamflow neural network model (PI)

Selected Articles in ISI Refereed Journals (Under Review)

Noori*, R., Tian, F., Ni, G., Bhattarai, R., Hooshyaripo, F., ThSSim: A novel tool for simulation of reservoir thermal stratification. *Nature – Scientific Reports* (Under Review).

Noori*, R., Dodangeh, M., Berndtsson, R., Hooshyaripor, F., Javadi, S., Adamowski, J., 2018. PODMT3DMS: Proper orthogonal decomposition linked to the MT3DMS model for nitrate simulation in aquifers. *Water Research* (Under Review).

Noori*, R., Tian, F., Ni, G., Bhattarai, R., Noury, M., Moradi, M., Thermal stratification of dam reservoirs in Iran. *Science of the Total Environment* (Under Review).

Selected Articles in ISI Refereed Journals (PUBLISHED)

Ramezani, M., Noori*, R., Hooshyaripour, F., Deng, Z., Sarang, A., Numerical modeling-based comparison of longitudinal dispersion coefficient formulas for solute transport in natural rivers. *Hydrological Science Journal* (ACCEPTED).

Noori*, R., Tian, F., Berndtsson, R., Klove, B., Abbasi, M., Vesali, M., Modabberi, A., Recent and future trends of sea surface temperature over Persian Gulf and Gulf of Oman. *PloS ONE* DOI:10.1371/journal.0212790.

Noori*, R., Berndtsson, R., Adamowski, J., Abyaneh, M.R., The Effects of Thermal Stratification on Depth Variation of Water Quality Parameters in Karkheh Reservoir. *Journal of Hydrology: Regional Studies* <https://doi.org/10.1016/j.ejrh.2018.10.003>

Noori*, R., Berndtsson, R., Adamowski, J., Abyaneh, M.R., A critical review on the application of the National Sanitation Foundation Water Quality Index. *Environmental Pollution* <https://doi.org/10.1016/j.envpol.2018.10.076>

Ghahremanzadeh, H., Noori*, R., Adamowski, J., Baghvand, A., Modified-DRASTIC, modified-SINTACS, and SI methods for groundwater vulnerability assessment in the southern Tehran aquifer. *Journal of Environmental Science and Health, Part A* <https://doi.org/10.1080/10934529.2018.1537728>

Noori*, R., Dodangeh, M., Berndtsson, R., Hooshyaripor, F., Javadi, S., Bahjgand, A., Adamowski, J., 2018. A novel model for nitrate simulation in aquifers. *Hydrology and Earth System Sciences* <https://doi.org/10.5194/hess-2018-222>

- Noori, R., Asadi, N., Deng, Z., 2018. A simple model for simulation of reservoir stratification. *Journal of Hydraulic Research* <https://doi.org/10.1080/00221686.2018.1499052>
- Kheirabadi, H., Noori*, R., Samani, J., Adamowski, J.F., Ranjbar, M.H. and Zaker, N.H., 2018. A reduced-order model for the regeneration of surface currents in Gorgan Bay, Iran. *Journal of Hydroinformatics* <https://doi.org/10.2166/hydro.2018.149>
- Maghrebi, M., Karbassi*, A., Lak, R., Noori, R. and Sadrinasab, M., 2018. Temporal metal concentration in coastal sediment at the north region of Persian Gulf. *Marine Pollution Bulletin*, 135, pp.880-888. <https://doi.org/10.1016/j.marpolbul.2018.08.017>
- Rad, F., Partani*, S., Noori, R., Berndtsson, R., Adamowski, R., 2018. Relationship between water quality and macro-scale parameters (land use, erosion, geology, and population density) in the Siminehrood River Basin. *Science of the Total Environment* <https://doi.org/10.1016/j.scitotenv.2018.05.244>
- Balf. M.R., Noori*, R., Berndtsson, R., Ghaemi, A., 2018. Evolutionary Polynomial Regression Approach to Predict Dispersion Coefficient in Rivers. *Journal of Water Supply: Research and Technology - AQUA* <https://doi.org/10.2166/aqua.2018.021>
- Naseh, M.R.V., Noori*, R., Berndtsson, R., Adamowski, J., Sadaatipor, E., Groundwater Pollution Sources Apportionment in the Ghaen Plain, Iran. *International Journal of Environmental Research and Public Health* <https://doi.org/10.3390/ijerph15010172>
- Kasem, R., ALabdeh, D., Noori*, R. and Karbassi, A., 2017. A software sensor for in-situ monitoring of the 5-day biochemical oxygen demand. *Rudarsko-geološko-naftni zbornik*, 33(1), 15-23. <https://doi.org/10.17794/rgn.2018.1.3>
- Ghahremanzadeh, H., Noori*, R., Baghvand, A., Nasrabadi, H., 2017. Evaluating the main sources of groundwater pollution in the southern Tehran aquifer using principal component factor analysis. *Environmental Geochemistry and Health* <https://doi.org/10.1007/s10653-017-0058-8>
- Noori*, R., Abbasi, M.R., Adamowski, J.F. and Dehghani, M., 2017. A simple mathematical model to predict sea surface temperature over the northwest Indian Ocean. *Estuarine, Coastal and Shelf Science*, 197, 236-243. <https://doi.org/10.1016/j.ecss.2017.08.022>
- Noori*, R., Shiekhian, H., Hooshyaripor, F., Naghikhani, A., Adamowski, J.F., Ghiasi, B. (2016). Granular computing for prediction of scour below spillways. *Water Resources Management*, <https://doi.org/10.1007/s11269-016-1526-0>
- Noori*, R., Ghiasi, B., Shiekhian, H., Adamowski, J.F. (2016). Estimation of the dispersion coefficient in natural rivers using a granular computing model. *Journal of Hydraulic Engineering (ASCE)*, [https://doi.org/10.1061/\(ASCE\)HY.1943-7900.0001276](https://doi.org/10.1061/(ASCE)HY.1943-7900.0001276)
- Noori*, R., Deng, Z., Kiaghadi, A., Kachoosangi, F.T. (2015). How reliable are ANN,

ANFIS, and SVM techniques for predicting longitudinal dispersion coefficient in natural rivers?. *Journal of Hydraulic Engineering ASCE*, [https://doi.org/10.1061/\(ASCE\)HY.1943-7900.0001062](https://doi.org/10.1061/(ASCE)HY.1943-7900.0001062)

Noori*, R., Yeh, H.D., Ashrafi, Kh., Rezazadeh, N., Bateni, S.M., Karbassi, A.R., Kachoosangi, F.T., Moazami, S. (2015). A reduced-order based CE-QUAL-W2 model for simulation of nitrate concentration in dam reservoirs. *Journal of Hydrology*, 530, 645-656. <https://doi.org/10.1016/j.jhydrol.2015.10.022>

Noori*, R., Yeh, H.D., Abbasi, M., Kachoosangi, F.T., Moazami, S. (2015). Uncertainty analysis of support vector machine for online prediction of five-day biochemical oxygen demand. *Journal of Hydrology* 527, 833-843. <https://doi.org/10.1016/j.jhydrol.2015.05.046>

Dehghani, M., Saghafian, B., Nasiri-Saleh, F., Farokhnia, A., Noori. (2014). Uncertainty analysis of streamflow drought forecast using artificial neural networks and Monte-Carlo simulation. *International Journal of Climatology* 34 (4), 1169-1180. <https://doi.org/10.1002/joc.3754>

Noori*, R., Hooshyaripor, F. (2014). Effective prediction of scour downstream of ski-jump buckets using artificial neural networks. *Water Resources*, 41, 8-18. <https://doi.org/10.1134/S0097807814010096>

Noori*, R., Safavi, S., Shahrokni, S.A.N. (2013). A reduced-order adaptive neuro-fuzzy inference system model as a software sensor for rapid estimation of five-day biochemical oxygen demand. *Journal of Hydrology*, 495, 175-185. <https://doi.org/10.1016/j.jhydrol.2013.04.052>

Noori*, R., Karbassi, A.R., Ashrafi, Kh., Ardestani, M., Mehrdadi, N. (2013). Development and application of reduced-order neural network model based on proper orthogonal decomposition for BOD₅ monitoring: Active and online prediction. *Environmental Progress & Sustainable Energy*, 32(1), 120-127. <https://doi.org/10.1002/ep.10611>

Noori*, R., Ashrafi, Kh., Karbassi, A.R., Ardestani, M., Mehrdadi, N. (2013). Development and application of reduced-order neural network model based on proper orthogonal decomposition for BOD₅ monitoring: Uncertainty analysis. *Environmental Progress & Sustainable Energy*, 32(2), 344-349. <https://doi.org/10.1002/ep.11610>

Noori*, R., Karbassi, A.R., Khakpour, A., Vesali-Naseh, M.R. (2012). Chemometric Analysis of Surface Water Quality Data: Case Study of the Gorganrud River Basin, Iran. *Environmental Modeling & Assessment*, 17(4), 411-420. <https://doi.org/10.1007/s10666-011-9302-2>

Noori*, R., Karbassi, A.R., Ashrafi, Kh., Ardestani, M., Mehrdadi, N., Nabi-Bidhendi, G.R. (2012). Active and online prediction of BOD₅ in river systems using reduced-order support vector machine. *Environmental Earth Sciences*, 67, 141-149. <https://doi.org/10.1007/s12665-011-1487-9>

Noori*, R., Karbassi, A., Mehdizadeh, H., Sabahi, M.S. (2011). A framework development

for predicting the longitudinal dispersion coefficient in natural streams using artificial neural network. *Environmental Progress & Sustainable Energy*, 30(3), 439-449. <https://doi.org/10.1002/ep.10478>

Noori^{*}, R., Karbassi, A. R., Moghaddamnia, A., Han, D., Zokaei-Ashtiani, M.H., Farokhnia, A., Ghafari Gousheh, M. (2011). Assessment of input variables determination on the SVM model performance using PCA, Gamma test, and forward selection techniques for monthly stream flow prediction. *Journal of Hydrology*, 401(3), 177-189. <https://doi.org/10.1016/j.jhydrol.2011.02.021>

Noori^{*}, R., Sabahi, M.S., Karbassi, A.R., Baghvand, A., Taati-Zadeh, H., (2010). Multivariate statistical analysis of surface water quality based on correlations and variations in the data set. *Desalination*, 260, 129-136. <https://doi.org/10.1016/j.desal.2010.04.053>

Noori^{*}, R., Khakpour, A., Omidvar, B., Farokhnia, A. (2010). Comparison of ANN and principal component analysis-multivariate linear regression models for predicting the river flow based on developed discrepancy ratio statistic. *Expert Systems with Applications*, 37(8), 5856-5862. <https://doi.org/10.1016/j.eswa.2010.02.020>

Noori^{*}, R., Karbassi, A.R., Farokhnia, A., Dehghani, M. (2009). Predicting the longitudinal dispersion coefficient using support vector machine and adaptive neuro-fuzzy inference system techniques. *Environmental Engineering Science*, 26, 1503-1510. <https://doi.org/10.1089/ees.2008.0360>

Selected Articles in the Persian Refereed Journals

Ghiasi, B., Noori, R., Karbassi, A.R., Deng, Z. (2015). Estimating longitudinal dispersion coefficient in rivers using non-linear regression model. *Iranian Water Research Journal* (Accepted).

Naghikhani, A., Noori^{*}, R., Sheikhan, H., Ghiasi, B. (2015). Estimating scour hole dimensions of ski jump downstream of dams using granular computing model. *Iranian Journal of Hydraulics*, 9(3), 45-60. (Persian).

Eskandari, A., Noori^{*}, R., Rasouli, A., Vesalie-Naseh, M.R. (2014). Offering a suitable method for water quality management of the Sefidrood River based on canonical correlation analysis. *Environmental Researches*, 5, 79-86. (Persian).

Eskandari, A., Noori^{*}, R., Meraji, S.H., Kiaghadi, A. (2012). Development a proper software sensor for online estimation of the 5-days biochemical oxygen demand based on artificial neural network and support vector machine. *Journal of Environmental Studies*, 61, 71-82 (Persian).

Noori^{*}, R., Jafari, F., Asgharzadeh, D.F., Akbarzadeh, A. (2011). Offering a proper framework to investigate water quality of the Atrak River. *Iranian Journal of Health and Environment*, 4(2), 159-170 (Persian).

Noori^{*}, R., Khakpour, A., Dehghani, M., Farokhnia, A. (2011). Monthly stream flow prediction using support vector machine based on principal component analysis. *Water &*

Wastewater Journal, 77, 115-118 (Persian).

Noori^{*}, R., Karbassi, A.R., Mehdizadeh, H. (2010). Predicting the longitudinal dispersion coefficient in natural streams using developed artificial neural network model. *Water & Wastewater Journal*, 76, 99-104 (Persian).

Akbarzadeh, A., Noori^{*}, R., Farokhnia, A., Khakpour, A., Sabahi, M.S. (2010). Accuracy and uncertainty analysis of intelligent techniques for predicting the longitudinal dispersion coefficient in rivers. *Water & Wastewater Journal*, 75, 89-99 (Persian).

Noori^{*}, R., Farokhnia, A., Morid, S., Riahi-Madvar, H. (2008). Effect of input variables preprocessing in artificial neural network on monthly flow prediction by PCA and wavelet transformation. *Water & Wastewater Journal*, 69, 13-22 (Persian).

Noori^{*}, R., Kerachian, R., Khodadadi-Darban, A., Shakibaienia, A. (2007). Assessment of importance of water quality monitoring stations using principal components analysis and factor analysis: a case study of the Karoon River. *Water & Wastewater Journal*, 63, 61-69 (Persian).

Recent Supervised MSc and PhD Theses

MSc: 11 Students

PhD: 02 Student

Editorial Board in

Editor-in-Chief – Advances in Hydraulic Engineering

Editorial Board - Iore journal of Environmental Science

Editorial Board - American Journal of Biological and Environmental Statistics

Reviewer in

Journal of Hydrology

Journal of Hydrologic Engineering (ASCE)

Hydrology Research

Water Resources Management

Science of the Total Environment

Journal of Environmental Management

Environmental Modeling and Assessment

Environmental Processes

Journal of Hydrology: Regional Studies

International Journal of Digital Earth

Environmental Progress & Sustainable Energy

Environmental Engineering Science

Waste Management

International Journal of River Basin Management

Environmental Earth Sciences

Journal of Hydroinformatics

International Journal of Environmental Science and Technology

International Journal of Environmental Research

Skills

- I. Hydrologic modeling of watersheds with different rainfall-runoff models, e.g.

- HEC-HMS, SWAT, and WEAP
- II. Water quality modeling with different numerical models, e.g. CE-QUAL-W2, MIKE 21, MIKE 3, QUAL2K
 - III. Programming in MATLAB for application of ANN, ANFIS, and SVM models and also for data acquisition from netcdf (.nc) files
 - IV. Programming in MATLAB for application of statistical analysis methods, e.g. principal component analysis (PCA), principal factor analysis (PFA), cluster analysis (CA), canonical correlation analysis (CCA), multivariate regression analysis (MLR)
 - V. Climate change concepts and its impact assessment
 - VI. Optimization and search methods (e.g. GA, PSO and etc.)
 - VII. Big data management using PCA and EOF, and POD

Languages

English (Advanced)
Persian (Mother Tongue)

My Suggested Referees

Ronny Berndtsson, Prof., Lund University, E-mail: ronny.berndtsson@tvrl.lth.se
Fuqiang Tian, Assoc. Prof., Tsinghua University, E-mail: tianfq@mail.tsinghua.edu.cn
Sayed M. Bateni, Assist. Prof. University of Hawaii, E-mail: smbateni@hawaii.edu
Zhiqiang Deng, Prof., Louisiana State University, E-mail: zdeng@lsu.edu