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## EDUCATION:

**Free University of Brussels (Vrije Universiteit Brussel)**, Engineering Faculty, Hydrology and Hydraulic Engineering Department, Brussels, Belgium

Ph.D., Engineering Sciences (Hydrology), 2002 - 2006

Thesis: Simulating the Effects of Reforestation on Floods using Spatially Distributed Hydrologic Modeling and GIS

**University of Tehran**, Natural Resources Engineering Faculty, Watershed Management Department, Tehran, Iran

Master of Science (M.Sc.), Watershed Management Engineering, 1995 - 1997

Thesis: Comparison of Reservoir Flood Routing methods for Jiroft Dam

**University of Tehran**, Natural Resources Engineering Faculty, Watershed Management Department, Tehran, Iran.

Bachelor's degree, Rangeland and Watershed Management Engineering, 1991 - 1995

## RESEARCH INTEREST:

Hydrology, hydrological modeling, flood simulation, physics based modeling.

## PUBLICATION:

1. Ghonchepour, Diba; Sadoddin, Amir; **Bahremand, Abdolreza**; Croke, Barry; Jakeman, Anthony; Salmanmahiny, Abdolrassoul; **2023**, Detection and prediction of land use changes and population dynamics in the Gorgan-rud River Basin – Iran, *Land Degradation & Development*, 1-13, DOI: 10.1002/ldr.4662.
2. Ghonchepour, Diba; **Bahremand, Abdolreza**; Kinar, Nicholas; **2022**; Parameter Allocation Approach for Runoff Simulation in an Arid Catchment using the KINEROS2 Hydrological Model. *Natural Resource Modeling*, e 12364. <https://doi.org/10.1111/nrm.12364>.
3. Nadri, M.; Sheikh, V.; **Bahremand, A.**; Komaki, C.B.; Ghangherme, A.; **2022** Analysis of river flow regime changes using the Indicators of Hydrologic Alteration (Case study: Hableroud watershed). *Water and Soil Management and Modelling*. DOI: 10.22098/mmws.2022.11430.1129.
4. Nadri, M.; Sheikh, V.; Komaki, C.B.; **Bahremand, A.**; Ghangherme, A.; Siroosi, H.; **2022**; Detection and Prediction of Land Use Changes Using Modeling Approach within a GIS Environment (Case Study: Hablehroud Watershed). *Journal of Water and Soil Conservation*, 29 (2), 113-134.
5. Tamaskani Zahedi, Ali, Barani, Hossein, Mokhtari, Shahroo, **Bahremand, Abdolreza**; **2022**, Flood hazard and Risk maps using two-dimensional hydraulic model LISFLOOD-FP (Case Study: Araz Kooseh region). *Journal of Water and Soil Conservation*, 28 (4), 1-25.
6. Saeedi, Iman; Mikaeili Tabrizi, Ali Reza; **Bahremand, Abdolreza**; Salmanmahiny, Abdolrassoul; **2022**, Multi-criteria prioritizing of Green Infrastructure Practices and their combinations to Control Runoff in Tehran Metropolitan. *Journal of Environmental Studies*, 48 (1).
7. Ghonchepour, D., **Bahremand, A.**; **2022**, A Review on Thermodynamics in Water Cycle Emphasizing on Entropy and Maximum Entropy Production Principle. *Journal of Water and Wastewater Science and Engineering*, DOI: 10.22112/JWWSE.2021.304851.1285.
8. Mohammadlou, M., **Bahremand, A.**, Princz, D., Kinar, N., Haghnegahdar, A., & Razavi, S.; **2022**, Objective evaluation of the Global Environmental Multiscale Model (GEM) with precipitation and temperature for Iran. *Natural Resource Modeling*, e12343. <https://doi.org/10.1111/nrm.12343>
9. Saeedi, Iman; Mikaeili Tabrizi, Ali Reza; **Bahremand, Abdolreza**; Salmanmahiny, Abdolrassoul; **2022**, A Soft Systems Methodology and Interpretive Structural Modeling Framework for Green Infrastructure Development to Control Runoff in TehranMetropolis. *Natural Resource Modeling*, e12339. <https://doi.org/10.1111/nrm.12339>
10. Poorzaman, Saeed; Sadoddin, Amir; **Bahremand, Abdolreza**; **2022**, Flood hazard mapping using the CCHE2D numerical model in the Hable-rud River-a reach located downstream of Bone-Kuh Village, *Journal of Natural Environmental Hazards*, 31:1-16.

11. Zarghi, Abolfazl; **Bahreman, Abdolreza**; Sheikh, Vahedberdi; **2021**, Application of Parameter Allocation Approach in Hydrological Modeling with MIKE SHE Distributed Physical Model (Case Study: Ziarat Watershed, Golestan Province), *Iran-Water Resources Research*, 16, 4, 174-189.
12. Ghonchepour, Diba; Sadoddin, Amir; **Bahreman, Abdolreza**; Croke, Barry; Jakeman, Anthony; Salmanmahiny, Abdolrassoul; **2021**, A methodological framework for the hydrological model selection process in water resource management projects, *Natural Resource Modeling*, 34, 3, e12326.
13. Khosravi, Gholamreza; **Bahreman, Abdolreza**; Teimouri, Mehdi; Ahmad Usefi, Sajad; **2021**, Numerical Simulation of the Transverse Dike (Epi) and Islands effect over Water Flow Pattern in Natural Meandering of the Tajan River, *Journal of Water and Soil Conservation*, 28, 2, 159-175.
14. **Bahreman, Abdolreza**; Ahmadyousefi, Sajad; Sheikh, Vahedberdi; Komaki, Chooghi Bairam; **2020**, A parameter allocation approach for flow simulation using the WetSpa- Python model, *Hydrological Processes*, 35:e13992.<https://doi.org/10.1002/hyp.13992>.
15. Tajiki, M; Schoups, G; Hendricks Franssen, HJ; Najafinejad, A; **Bahreman, A**; **2020**, Recursive Bayesian estimation of conceptual rainfall-runoff model errors in real-time prediction of streamflow, *Water Resources Research*, 56, 2, e2019WR025237.
16. Khaleghi, Esmaeil; Sadoddin, Amir; Najafinejad, Ali; **Bahreman, Abdolreza**; **2020**, Flood hydrograph simulation using the SWMM model: A semiarid zone watershed case study, Shiraz Khoshk River, Iran, *Natural Resource Modeling*, 33, 2, e12269.
17. Afsharypour, Zeynab; **Bahreman, Abdolreza**; Abdolhosseini, Mohammad; **2020**, Application of Multivariate Approach in the Analysis of Hydrological Phenomena (Case Study: Flood in Boustan Dam Watershed of Golestan Province), *Irrigation Sciences and Engineering*, 43, 2, 35-48.
18. Mahmoodi, Zeinab; **Bahreman, Abdolreza**; Abdollahi, Khodayar; Sadoddin, Amir; Kuhestani, Shapour; Komaki, Chooghi Bairam; **2020**, Investigation of Temporal and Spatial Variations of Water Balance Components and Hydrograph Separation of Arazkouse Watershed through Groundwater Recharge Modeling using WetSpa Model, *Journal of Water and Soil Conservation*, 27, 1, 25-47.
19. **Bahreman, Abdolreza**; Jamali, Fateme; Komaki, Choobhi Bayram; **2020**, 2D Flood Simulation Using the Nays 2D Flood Model and Comparison with the Sentinel 2 Satellite Image (Case Study: Flood of March 2019 at the end of Arazkouse River, Golestan Province), *Journal of Water and Soil Conservation*, 27, 2, 223-236.
20. Khosravi, Gholamreza; Sadoddin, Amir; Ownegh, Majid; **Bahreman, Abdolreza**; Mostafavi, Hossein; **2020**, Application of a hierarchical multi-scale framework to delineating spatial units of watersheds (Case study: theTil-abad Watershed, Golestan Province), *Journal of Water and Soil Conservation*, 26, 6, 44225.

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27. Kornejady, Aiding; Ownegh, Majid; Pourghasemi, Hamid Reza; **Bahreman, Abdolreza**; Motamedi, Manouchehr; **2020**, (Landslide susceptibility prediction using the coupled Mahalanobis distance and machine learning models (case study: Owghan watershed, Golestan province, *Researches in Earth Sciences*, 11, 2, 44214.
28. Ghasemieh, Hoda; Ghasemieh, Maryam; **Bahreman, Abdolreza**; **2020**, The introduction of landscape Evolution Models and their Applications with Emphasis on the CAESAR Lisflood Hydrodynamic Model, *Journal of the Geographical Engineering of Territory*, 4, 7, 116-100.
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- indicators of pastoralists (case study: Rangelands of Haraz River Basin, Mazandaran province, Iran), *Journal of Rangeland Science*, 9, 1, 24-39.
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  33. Rahimzadeh, Omid; **Bahremand, Abdolreza**; Noura, Nader; Mukolwe, Micah; **2019**, Evaluating flood extent mapping of two hydraulic models, 1D HEC-RAS and 2D LISFLOOD- FP in comparison with aerial imagery observations in Gorgan flood plain, Iran, *Natural Resource Modeling*, 32, 4, 44208.
  34. Daraei, Sahar; **Bahremand, Abdolreza**; Karimi, Hamid; **2019**, Evaluation of the effect of land use changes on subsurface flow using WetSpa model, case study: Horo-Dehno Watershed, *Watershed Engineering and Management*, 11, 2, 392-407.
  35. Saber Chenari, Kazem; **Bahremand, Abolareza**; Berdi Sheikh, Vahed; Bairam Komaki, Chooghi; **2019**, Gully Erosion Hazard Zoning in the Gharnaveh Watershed, Golestan Province, *Journal of Engineering Geology*, 13, 1, 69-94.
  36. Rezayi, Fatemeh; **Bahremand, Abdolreza**; Sheikh Vahedberdi; Dasturani, MohammadTaghi; Tajbakhsh, Mohammad; **2019**, Determination of the Most Important Parameters Affecting the Urban Runoff using SWMM Model (Case Study: Mashhad City, District 9), *Journal of Watershed Management Research*, 9, 18, 135-145. 37. Fazel, Abdolazim; Ghorbani, Rasul; **Bahremand, Abdolreza**; **2019**, Influence of Stream channel morphology and in-stream habitats on fish community in Golestan province Streams, *Journal of Applied Ichthyological Research*, 7, 3, 17-30.
  38. Kavianpoor, Amirhossein; Barani, Hossein; Sepehri, Adel; **Bahremand, Abdolreza**; **2019**, Evaluating the impacts of climate change on pastoralists activities (Case study: Rangelands of Haraz river basin), *Rangeland*, 13, 1, 26-38.
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  41. **\*Bahremand, A.**; Mohammadlou, M.; Razavi, S.; Princz D.; **2019**, Verification of GEM data in Iran using synoptic stations' temperature and precipitation data, World Conference on Natural Resource Modelling, Montréal, Canada, 22-24 May.
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49. Rezayi, F; **Bahremand, A**; Shaikh, VB; Dasturani, MT; Tajbakhsh, M; **2019**, ASSA models and GIS integration in the determination of flooding point in different return periods, *Cercetari Agronomice in Moldova*, Vol.52, No.1, pp.91-105, ref.13.
50. Samadi, Meisam; **Bahremand, Abdolreza**; Salajegheh, Ali; Ownegh, Majid; Hoseinalizadeh, Mohsen; Fathabadi, Abolhasan; **2019**, Estimation the contribution of geological units as sources of suspended sediment yield using sediment fingerprinting approach (case study: The Toulbane watershed, Golestan Province), *Researches in Earh Sciences*, 10, 38, 1-20.
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53. Javidan, Narges; **Bahremand, Abdolreza**; Javidan, Rana; Onagh, Majid; Komaki, C; **2018**, Impacts of Land use Changes Scenarios on Water Balance Components using WetSpa Model (Case Study: Ziarat Watershed of Golestan Province), *Journal of Watershed Management Research*, 9, 17, 168-181.
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55. \***Bahremand, A**; Razavi, S; Pietroniro, A; Haghnegahdar, A; Princz, D; Gharari, S; Elshamy, M; Tesemma, Z; **2018**, The Application of MESH Land Surface-Hydrology Model in Sefidrud River Basin, Iran. First annual meeting of GWF, 2018, June 3 -6, McMaster University & Six Nations of the Grand River, Hamilton & Ohsweken, Ontario, Canada.
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distributed hydrological model, WetSpa, in the Dinvar Watershed, Karkheh, Iran, *Watershed Engineering and Management*, 7, 4, 500-510.

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## ACADEMIC TEACHING EXPERIENCE:

Courses taught for Department of Watershed Management:

B.Sc.: Hydrology, Cartography, Hydraulics

M.Sc.: Hydrological Modeling, Rangeland Ecosystem Modeling, River Engineering, Flood Control, Rangeland Hydrology, Arid Zone Hydrology

Ph.D.: Advanced Hydrology, Watershed Simulation, River Management

Supervision of students' theses:

- Supervised 45 M.Sc. theses
- Supervised 10 Ph.D. theses

- Co-supervised 5 Ph.D. theses
- 10 research projects (principal investigator)

## **SERVICE AND PROFESSIONAL MEMBERSHIP:**

1. Editor-in-Chief of Journal of Water and Soil Conservation (Iran)
2. Associate Editor of Natural Resources Modeling (Wiley)
3. Editorial board member of Environmental Resources Research (Iran)

## **AWARDS:**

1. A 4-year full scholarship for out-of-country PhD studies awarded by the Ministry of Science and Technology of Iran (2002-2006).
2. Bahar Azadi Gold Coin for achieving a unanimous vote of promotion committee. Awarded for the promotion from Assistant to Associate Professor (2012).
3. Best Student Paper of the IASME / WSEAS International Conference on Water Resources, Hydraulics & Hydrology (WHH'06) at Chalkida, Greece (May 11-13, 2006)
4. Grant for application of the MESH hydrological model, received from University of Saskatchewan (Global Institute of Water Security), 24 May 2018.
5. Achieving a unanimous vote of the promotion committee. For the promotion from Associate Professor to Full Professor (2022).

## **LANGUAGES:**

1. Persian: Native
2. English: IELTS score =7
3. French: Conversational