

## *Personal and Education Details*

### **Personal Information:**

- Surname: Mohsen
- Family Name: Tavakoli
- Date of Birth: 23 September 1976
- Place of Birth: Ilam, Iran
- Marriage Status: Married
- Language Skill: Persian, English, French (basic)

### **Bachelor Degree Information**

- Field: Natural Resources Engineering - Range and Watershed Management
- Date: 1995 - 1999
- University: Isfahan University of Technology, Isfahan, Iran
- Average Score: 15.05
- Student Score: Third
- Seminar Subject: Investigation of Flood Hazard Management Methods
- Project Subject: Assessment of Range and Watershed in Muteh Region, Isfahan, Iran

### **Master Degree Information**

- Field: Natural Resources Engineering - Watershed Management
- Date: 1999 - 2001
- University: Gorgan University of Agriculture and Natural Resources Sciences, Gorgan, Iran
- Average Score: 17.70
- Student Score: First
- Seminar Subject: Investigation of Different Methods for Assessment Environmental Effects of Water Resources Constructions for Sustainable Development
- Project Subject: Flood Hazard Zonation and its Characteristics in a Part of Middle Attrak River.

## **PhD Information**

- **Field:** Water Resources Engineering
- **Date:** 2008 - 2012
- **University:** Vrije Universiteit Brussel (VUB), Brussels, Belgium
- **Student Score:** Great distinction
- **Thesis Title:** Simulating soil moisture and climate change impacts in a watershed through application of the distributed hydrological WetSpa model
- **Scientific Position:** **Associated Professor (from 2019)**

## **Experiences**

### **Official Employment:**

- Staff Member of Scientific Board, Ilam University, Ilam, Iran (2001 until now)

### **Positions:**

- The Head of Department of Natural Resources, Agriculture Faculty, Ilam University, Ilam, Iran (2 years)
- The Deputy of Agriculture Faculty, Ilam University, Ilam, Iran (1 year)
- The Head of Department of Natural Resources, Agriculture Faculty, Ilam University, Ilam, Iran (2 years)
- The Head of Education Department, Ilam University, Ilam, Iran (5 years)

### **Teaching:**

- General Hydrology
- Applied Hydrology
- Cartography
- Soil and Water Conservation
- Watershed Management
- Principles of Aerial Photographs

- River Engineering
- Desertification and Its control

### **Membership:**

- A Member of Agricultural and Natural Resources Engineering Organization, Iran
- A Member of Iranian Society of Irrigation & Water Engineering
- A Member of Iranian Integrated Watershed Management

### **Collaborations:**

- Representative of Ilam University in Climatic Hazard Prevention Committee, Ilam Meteorological Organization, Ilam, Iran
- Representative of Ilam University in Ilam Providence GIS Users Committee, Ilam, Iran
- Collaboration to Private Scientific Companies
- Reviewer of Several Scientific Journals

### **Research Interests:**

- Hydrology
- Surface Water Modelling
- Water Resources Management
- GIS and RS
- Climate Change Modeling
- Watershed Management
- Desertification and Its Control
- Land Degradation and Modeling
- Environmental Sciences

### **Scientific Papers**

#### **Journals**

- Mosaedi, A., *M. Tavakoli*. 2004. Investigation on the finding of best method for determining Manning roughness coefficient and flood hazard zonation in a part of mid- Atrak river, J. Agric. Sci. Natur. Resor. Vol. 10(4), Gorgan, Iran

- **Tavakoli, M.**, M. Rostaminia. 2006. Modeling the regional flood in Ilam Province, Journal of Agricultural Science, VOL. 12, No 1, Islamic Azad University, Tehran, Iran
- **Tavakoli, M.**, M. Hosayni. 2006. Studying and Determination the Freezing Indexes and its Beginning of Autumnal Freezing in Iran (Case Study Ekbatan Station), Journal of Nivar, VOL. 60-61, Meteorological Organization, Iran
- **Tavakoli, M.**, A. Piri. 2007. Studying the effect of the Range Plans on soil erosion in Ilam Province, Journal of Forest and Range, Vol. 75, Iran
- Karimi, H., **M. Tavakoli**. 2006. Inspection of encountered water in power tunnel of Saymareh dam site, Ilam, Engineering geology, Vol.2, No.1, Iran
- **Tavakoli, M.**, F. De Smedt. 2011. impact of climate change on streamflow and soil moisture in the Vermilion Basin, Illinois, USA. Journal of Hydrologic Engineering doi:10.1061/(ASCE)HE.1943-5584.0000546.
- Michael B. Smith, Victor Koren, Ziya Zhang, Yu Zhang, Seann M. Reed, Zhengtao Cui, Fekadu Moreda, Brian A. Cosgrove, Naoki Mizukami, Eric A. Anderson, **DMIP2 Participants**. 2012. Results of the DMIP 2 Oklahoma experiments. Journal of Hydrology, (418–419), 7–48.
- Vansteenkiste T, **M. Tavakoli**, V. Ntegeka, P. Willems, F. De Smedt, O. Batelaan. 2012. Climate change impact on river flows and catchment hydrology: a comparison of two spatially distributed models. Hydrol Process DOI: 10.1002/hyp.9480
- **Tavakoli M.**, F. De Smedt. 2012. Validation of soil moisture simulation with a distributed hydrologic model (WetSpa). Environ Earth Sci DOI 10.1007/s12665-012-1957-8
- Fereshteh A., Tavakoli M., Fathizad H. (2021). Evaluation of climate change impacts on soil erosion in a catchment in the west of Iran. Arabian Journal of Geosciences.
- Miripanah Z., Tavakoli M., Rostaminia M., Naderi M. (2019). Carbon sequestration via afforestation as a sustainable action to mitigate climate change in Western Iran. Natural Resources Forum.
- Safarian S., Tavakoli M., Rostami N., Ebrahimi H. (2019). Evaluation of climate change effects on extreme flows in a catchment of western Iran. Frontiers of Earth Science
- Mirhasani M., Rostami N., Bazgir M., Tavakoli M. (2019). Living Windbreak design for wind erosion control in arid regions (Case Study: Dehloran, Ilam). Desert Journal.
- Azizi E., Tavakoli M., Karimi H., Faramarzi M. (2019). Evaluating the efficiency of the neural network to other methods in predicting drought in arid and semiarid regions of western Iran. Arabian Journal of Geosciences.

- Mirhasani M., Rostami N., Bazgir M., Tavakoli M. (2019). Threshold Friction Velocity and Soil Loss across Different Land Uses in Arid Regions, Iran. *Arabian Journal of Geosciences*.
- Baiati A., Tavakoli M., Babaeian I., Dargahian F. (2017). Assessment and Application of Two General Circulation Models (HadCM3 and MPEH5) for Investigating Climate Change (Case Study: Khorramabad Synoptic Station, Iran). *Desert Ecosystem Engineering Journal*
- Saymohammadi S., Zarafshani K., Tavakoli M., Mahdizadeh H., Amiri F. (2017). Prediction of Climate Change Induced Temperature & Precipitation: The Case of Iran.
- Karami E., Karimi H., Banparvari Gh. (2015). Investigating the effects of water transfer from Karkheh Dam on the physico-chemical properties of soil in Dasht-e Abbas plain, Ilam. *Progress in Biological Sciences*.
- Vansteenkiste T., Tavakoli M., Ntegeka V., De Smedt F., Batelaan O., Pereira F., Willems P. (2014). Intercomparison of hydrological model structures and calibration approaches in climate scenario impact projections. *Journal of Hydrology*.
- Tavakoli M., De Smedt F., Vansteenkiste T., Willems P. (2014). Impact of climate change and urban development on extreme flows in the Grote Nete watershed, Belgium. *Natural Hazards*.
- Vansteenkiste T., Tavakoli M., Van Steenbergen N., De Smedt F., Batelaan O., Pereira F., Willems P. (2014). Intercomparison of five lumped and distributed models for catchment runoff and extreme flow simulation. *Journal of Hydrology*.
- Tavakoli M., De Smedt F. (2012). Impact of Climate Change on Streamflow and Soil Moisture in the Vermilion Basin, Illinois. *Journal of Hydrologic Engineering*.
- Tavakoli M., De Smedt F. (2012). Validation of soil moisture simulation with a distributed hydrologic model (WetSpa). *Environmental Earth Sciences*.

### Conferences

- **Tavakoli, M.**, A. Mosaedi. 2004. Studying the properties of the floods of the Atrak River in Maraveh Tapeh, The First National Conference on Soil and Water Management, May 2004, Kerman, Iran
- **Tavakoli, M.**, A. Piri, S. Ahmadi, M. Kohzadian. 2005. Study the effect of forestry plans on Dehloran sand duns physicochemical characteristics, The First National Conference of Wind Erosion, Yazd, Iran

- Karimi, H., J. Ashjari, **M. Tavakoli**. 2006. Water leakage assessment from right abutment of Patagh dam, Kermanshah, Proceedings of The 5th national conference on engineering geology and the environment, Tehran, Iran
  
- **Tavakoli, M.** 2006. Evaluating the impacts of implementing waterspreading plan on characteristics of vegetation in Dehlorans waterspreading station, Ilam, 2nd National Conference on Soil and Water Management, Kerman, Iran
  
- Garaie, P., H. Karimi, **M. Tavakoli**. 2006. Landslide susceptibility mapping in Ilam dam basin and the effective factors in their occurrence, Proceedings of The 5th national conference on engineering geology and the environment, Tehran, Iran
  
- Khedri, B., **M. Tavakoli**, A. Tahmasebi, A. Moghadamnia. 2007. Application of Scalogram model for prioritization subcatchments in Ilam dam catchment. 4th National Conference of Iran Watershed Management and Engineering, Tehran, Iran
  
- Karimi, H., P. Garaie, **M. Tavakoli**, A. Aezami. 2007. Landslide susceptibility mapping in Ilam dam basin by AHP method, 4th National Conference of Iran Watershed Management and Engineering, Tehran, Iran
  
- **Tavakoli, M.**, B. Khedri, A. Tahmasebi. 2007. Application MPSIAC method for calculating erosion and sediment in order to prioritization subcatchments in Ilam dam catchment, 3rd National Conference on Soil and Water Management, Kerman, Iran
  
- **Tavakoli, M.**, F. De Smedt. 2010. Application of a distributed hydrological model (WetSpa) for simulation of soil moisture content, 2nd international interdisciplinary conference on HydroPredict, Prague, Czech Republic.
  
- Vansteenkiste, T., Holvoet, K., Willems, P., De Smedt, F., **Tavakoli, M.**, Phiri, L., Fantilanan, J. (2010). Assessing the impact of climate change on catchment hydrology using the distributed models MIKE SHE and WetSpa. 4th Belgian Geography Days. Leuven, 22-23 October 2010.
  
- Vansteenkiste T, **M. Tavakoli**, K. Holvoet, V. Ntegeka, P. Willems, F. De Smedt, W. Vanneuville, F. Pereira. 2011 Effect van klimaatwijziging op de bekkenhydrologie en globale waterbeschikbaarheid – gevalstudie voor Vlaanderen. Waterforum “Adaptatie van het Vlaamse watersysteem aan klimaatverandering en bevolkingstoename: Welke kennis is er (nodig)?”. Brussel, Belgium
  
- **Tavakoli M**, F. De Smedt, T. Vansteenkiste, P. Willems. 2012. Investigation of the effects of climate change on the water resources in the Grote Nete catchment, Belgium. proceeding of the 9th International Symposium on Ecohydraulics 2012, Vienna, Austria