



Somayeh Sima

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Research Interests

Hydrology & water resources management, application of remote sensing and GIS for environmental monitoring, water quality management, environmental flows, and conservation and restoration of wetlands.

Education

Postdoctoral research fellow:

Remote Sensing Research Center (RSRC) at Sharif University of Technology, Tehran, Iran. January 2014 to 2015.

Ph.D.:

Water Resources Engineering, Sharif University of Technology, Tehran, Iran. November 2013. Thesis: “*Modelling Evaporation & Salinity Variation in Saline Lakes Using Spatial System Dynamics: The Case of Urmia Lake*”. Advisor: Dr. Masud Tajrishy. Thesis grade: Excellent.

Master of Science:

Environmental Engineering, Sharif University of Technology, Tehran, Iran, January 2006. Thesis: “*Dam Release for Environmental Water Requirements*”. Advisor: Dr. Masud Tajrishy.

Bachelor of Science:

Civil Engineering, Iran University of Science & Technology, Tehran, Iran, June 2001.

Awards and Honors

2006: Outstanding Graduated Student, Sharif University of Technology, 2006.

2003: Outstanding Graduated Student, Iran University of Science and Technology, 2001.

2002: Achieving the first grade in the 1st National Concrete Olympiad which was held by Iran Concrete Institution (ACI representative in Iran).

Publications

Journal Papers:

Sima, S., and Tajrishy, M., 2015. Application of Spatial Interpolation Methods to Develop Water Quality Maps of Urmia Salt Lake, Iran. *Journal of Scientia Iranica A*, 22(1), 30-46.

Saghafian, B., Meghdadi, A., **Sima, S.**, 2015. Application of the WEPP model to determine sources of run-off and sediment in a forested watershed. *Journal of Hydrological Process*, 29, 481–497 (2015).

Sima, S., Ahmadalipour, A. and Tajrishy, M., 2013. Remote sensing of water surface temperature over a hyper-saline lake and its effects on the lake evaporation. *Journal of Remote Sensing of Environment*, 136, 374–385.

Sima, S., Tajrishy, M. 2013. Using satellite data to extract volume–area–elevation relationships for Urmia Lake, Iran. *Journal of Great Lakes Research*, 39, 90–99.

Saghafian, B., **Sima, S.**, Sadeghi, S. and Jeirani, F., 2012. Application of Unit Response Approach for Spatial Prioritization of Runoff and Sediment Sources, *Journal of Agricultural Water Management*, 109, 36-45.

Conference Papers:

Sima, S., Ganjali, S., 2016. Developing a Comprehensive Approach for the Determination of Environmental Water Requirements of Wetlands, U.S.-Iran Symposium on wetlands, March 28-30, 2016. Irvine, USA.

Sima, S., Tajrishy, M., and Ahmadalipour, A., 2012. Comparison of the Hydro-meteorological conditions in two adjacent Lakes: Lake Urmia and Lake Van. ASLO 2012 aquatic sciences meeting, Japan, Poster presentation: 10293.

Sima, S., Ahmadalipour, A., Shafiee Jood, M. and Tajrishy, M. "Monitoring Urmia Lake area variation using MODIS Satellite data". Accepted for Oral Presentation in EWRI 2012 Congress.

Sima, S., Shafiee Jood, M., Tajrishy, M. and Abrishamchi, A., 2012. "Re-operation of Maroon Multipurpose Reservoir Considering Downstream Environmental Requirements". International Conference on Dams and Hydropower, Feb. 2012, Tehran, Iran.

Saghafian, B., **Sima, S.**, Sadeghi, S. and Jeirani, F., 2011. Application of SWAT model for sustainable soil and water resources management in Iran, 1st international conference on Sustainable Watershed Management, September 2011, Istanbul, Turkey.

Sima, S., Tajrishy, 2010," Monitoring temperature changes in a hypersaline lake using MODIS-derived water temperatures (the case of Urmia Lake, Iran)", Proceeding of the 6th International Symposium on Environmental Hydraulic, Athens, Greece.

Sima, S., Tajrishy, M., 2006. "Water Allocation for Wetland Environmental Water Requirements: Case Study of the Jarrahi Basin, Iran", World Environment and Water Resources Congress proceedings, ASCE.

Sima, S., Tajrishy, M., 2006. "Modeling Water Allocation between Wetland and Irrigated Agriculture: Case Study of the Jarrahi Basin, Iran", HydroInformatic Conference, Nice, France, September 2006.

Sima, S., Maknun, R. and Tajrishy, M., 2007. "Economic Aspects of Eutrophication", National Workshop on Eutrophication and its Management in reservoirs, IRCOLD, (In Persian).

Sima, S., Jalali, R. and Tajrishy, M., 2006. "Taking in to Account Environmental Water Requirements In National-scale Water Resources Assessments (IRAN)", 2nd Conference on Iran Water Resources Management, (In Persian).

Sima, S., Tajrishy, M., 2006. "Estimating Water requirements of the Shadegan wetland", 7th International Congress of civil engineering, Tarbiat Modarres University, May 2006 (In Persian).

Other Publications:

Dehzad, B., **Sima, S.,** 2012. Guideline for Finding Aquatic Ecosystems Environmental Water Requirement. No. 557, Office of Deputy for Strategic Supervision Ministry of Energy Department of Technical Affair, Vice Presidency for Strategic Planning and Supervision, (In Persian).

Sima, S., Tajrishy, M. and Abrishamchi, 2009. "A Guideline to Determine Environmental Water Requirements of Wetlands", Iranian Committee On Large Dams, (In Persian).

Courses

"Water Quality Management", "Application of GIS & RS in Hydrology and Water Resources Engineering", "Water and Wastewater Quality", and "Environmental Impact Assessment of Water and Wastewater Projects".

Research Project

Project Title	Project Owner	Duration	Position
Determining Environmental Water Requirements of Wetlands and Rivers in Urmia Basin	East Azarbaijan Department of Environment	Jul 2015- 2016	Executive manager
Water Balance Study of Urmia Basin in 1995 and 2010	Urmia Lake Restoration Program	Jan-Jun 2014	Technical Consultant
Estimating Evapotranspiration and conservable water in agricultural area of Urmia Basin	Urmia Lake Restoration Program	Feb 2013- May 2014	Executive manager
Estimation of Evaporative Loss from the Buffer Zone of Urmia Lake	Urmia Lake Restoration Program	Jan-Jun 2013	Executive manager
Modelling Evaporation & Salinity Variation of Brines Using Spatial System Dynamics	Iran Water Resources Management Company	Sep2009-Dec 2013	Main Researcher

Professional Memberships

June 2015-Present: National Committee on wetland conservation, Department of Environment

2013-Present: Iran Water Resources Management Company, Environmental Committee

2013-2015: Water resources and demand working group, Scientific Committee of Urmia Lake
Restoration program

2002-Present: Iranian Committee on Large Dam, Environmental Impact Subcommittee

2005-Present: Iran Water resources and Hydrology Institute

2010-2012: Remote sensing Working Group, Iranian Space Agency

2009-2011: Environmental Flow Working Group, Iran Ministry of Energy

2002-2007: Iranian Concrete Institute