

# Curriculum Vitae

## Mahdi Zarghami

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**2023- Professor**, Faculty of Governance, University of Tehran

**2021 Editor-in-Chief**, Iran Water Resources Research Journal

**2020- Adjunct Faculty**, Policy Research Institute and Institute of Energy, Water and Environment, Sharif University of Technology

**2020 Invited Lecturer** Faculty of Civil Engineering, Sharif University of Technology

**2016- Professor**, Faculty of Civil Engineering, University of Tabriz

**2015- Researcher**, Socio-Technical Systems Research Center and Comprehensive Initiative on Technology Evaluation, Massachusetts Institute of Technology (MIT), Boston, USA

**2014-2015 Researcher**, Department of Civil and Environmental Engineering, Tufts University, Boston, USA

- Advisor: Professor Shafiqul Islam

**2011-2016 Associate professor**, Faculty of Civil Engineering, Water Department, University of Tabriz

**2007-2011 Assistant professor**, Faculty of Civil Engineering, Water Department, University of Tabriz

**2006- 2007 Visiting Researcher**, Systems and Industrial Engineering Dept., University of Arizona, Tucson, AZ, USA

- Advisor: Professor Ferenc Szidarovszky

**2002-2007    PhD,** Department of Civil Engineering, Sharif University of Technology, Tehran, Iran

- Major: Water Resources Management, Minor: Decision Making
- Supervisor: Dr. Reza Ardakanian (now he is Iran' Minister of Energy)
- Co-supervisors: Prof. Azizollah Memariani and Prof. Ferenc Szidarovszky
- Title of thesis: A Revised Ordered Weighted Averaging Operator under Fuzzy and Probabilistic Uncertainties- An Application in Ranking the Water Resources Development Projects in Iran

**1998-2001    MSc,** Institute of Research on Planning and Management, Tehran, Iran

- Major: Water Resources Planning, Minor: system and policy analysis
- Supervisor: Prof. Ahmad Abrishamchi
- Co-supervisor: Prof. Mohammad Tabibian
- Title of dissertation: Multi-Criteria Decision Making In Water Supply and Demand Management

**1994-1998        BSc,** Sharif University of Technology, Tehran, Iran

- Major: Civil Engineering
- Supervisor: Dr. Masoud Tajrishi

**1990-1994        High School Diploma,** Shahid Madani (branch of national organization of developing exceptional talents, SAMPAD), Tabriz, Iran.

#### **§ Membership background**

1. IAHS: International Association on Hydrologic Science
2. IRNCID: Iranian Commission on Irrigation and Drainage
3. IRWRA: Iranian Water Resources Association
4. SIVE: Iranian Value Engineering Association
5. ISIF: International Society of Information Fusion
6. IWRA: International Water Resources Association
7. MCDM: Multi Criteria Decision Making Society
8. IROS: Iranian Operations Research Society
9. Sharif Uni. of Technology Alumni Association.
10. Watershed Management Society of Iran
11. IWA: International Water Association
12. EURO Working Group on OR for Development, Junior Fellow
13. North American Lake Management Society
14. EWRI: Environmental and Water Resources Institute
15. IAHR: International Association for Hydro-Environment Engineering and Research
16. Iranian Agricultural Economics Society
17. International Society for Metaheuristic Optimization in Science and Technology

#### **§ Responsibilities**

- Member of organizing committee, Director of publication and media, 3<sup>rd</sup> Iran Water Resources Management Conference, 14-16 October 2008, University of Tabriz.
- Organizer, Workshop on Multi-Criteria Decision Making for Water Resources and Environment Management, 13 August 2008, University of Tabriz.
- Advisor on research projects and member of Water planning and Economics committee, East Azerbaijan Regional Water Company, 2008- now
- Representative of Iranian Operations Research Society (in University of Tabriz).
- Research Fellow, Earth System Governance Research Project, from 2010.
- Member of the governing board, Iran Water Resources Association, from 2010.
- Advisor of Civil Engineering Student Scientific Association, University of Tabriz, from 2010.
- Member of advisory board in Fourth Iranian National Conference on Water Resources Management, 2010.
- Field trips responsible: Taleghan Reservoir, Latyan Reservoir, Tehran Meteorological Organizations, Uremia Lake and its causeway project, Shahriar Reservoir, Alavian Reservoir, Bandar Abbas Port, Aras Reservoir, Khodafarin Dam, Sattarkhan Dam, Tabriz Wastewater Treatment Plant, Tabriz Infrastructures for Irrigating Parks, Ghalechai Dam, Zarrinerud Water Transfer Project, Sahand Meteorological Radar.
- Member of advisory board on "Infrastructure, Environment and Health" for Research Center of Tabriz City Council, from 2011.
- Member of organizing committee, 4<sup>th</sup> Iran Water Resources Management Conference, 3-4 May 2011, Amirkabir University of Technology.
- Member of Water Science and Eng. Group for Curriculum Planning in Ministry of Science, Research and Technology, from 2011.
- Member of the Committee on Non-Revenue Water Reduction, East Azerbaijan Province Rural Water and Wastewater Company, from 2011.
- Representative for University of Tabriz in the research fields of Ministry of Energy, 2012-now.
- Member of Committee on Water Planning and Economics, East Azerbaijan Water Company, Since 1999.
- Member of Committee on Project Management, East Azerbaijan Water Company, 2013.
- Member of Committee on Water Management, Parks Organization of Tabriz Municipality, 2014.
- Boston Water Group, 2014
- Co-organizer: Can Water Diplomacy Enable a New Future for the Urmia Lake? A two-day workshop on a case study using the Water Diplomacy Framework. July 02-03, 2015 at Tufts University and MIT.
- Co-organizer: "Can Water Diplomacy Enable a New Future for the Urmia Lake?", 2nd Congress on Advancement of Science and Technology in Islamic World, 29 Feb-01 March 2016, University of Tabriz.
- Co-organizer: A Discussion Panel on Urmia Lake; Adaptive Solutions under Climate Change? by the help of National Committee of the Lancet Commission: Climate Change and Public Health and the Faculty of Geography and Planning at the University of Tabriz, Nov. 23, 2016.

- Co-organizer: Second Discussion Panel on Urmia Lake; Finland Experiences for Environmental Stewardship, by the help of Oulu University and the Faculty of Geography and Planning at the University of Tabriz, March. 11-12, 2016.
- Founding member and head of Chairing Committee, Azerbaijan Water Diplomacy Room: The mission of this consulting NGO includes policy making for agriculture and rural development, 2016-now.
- Co-organizer: International Workshop on Nexus Approach for Environmental Resources Management, by the help of United Nations University (UNU-FLORES) at the University of Tabriz, Nov. 12-13, 2017.
- Director, Green Management Project for the University of Tabriz, 2018
- Representative of Iran Water Resources Association in East Azerbaijan from 2018.
- Founding Member, Center of Excellence in Hydroinformatics, Faculty of Civil Eng., University of Tabriz, Iran from 2018.
- Advisor to Vice Minister of Energy, Iran from 2019.

### **§ Editorial Positions**

- Editor-in-Chief, Journal of Iran Water Resources Research, from 2021 (in Farsi and English)
- Editorial Board, Journal of Water and Irrigation Management, from 2019 (in Farsi and English)
- Editorial Board, Journal of ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems
- Editorial Board, Journal of Systems Thinking in Practice

### **§ Awards**

- Scholarship from Ministry of Science, Research and Technology of Iran, 2001, to study PhD in Sharif University of Technology.
- Scholarship from Ministry of Science, Research and Technology of Iran, 2005, to attend the 7<sup>th</sup> IAHS conference in Foz do Iguacu, Brazil.
- Distinguished student in Sharif University of Technology, 2005.
- Grant from SIWI, to attend 15th Stockholm Water Symposium, World Water Week, 21-27 August 2005, Stockholm, Sweden.
- Scholarship from Ministry of Science, Research and Technology of Iran, 2006, to be visiting scholar at the University of Arizona, Tucson, Arizona.
- Travel Grant from Systems and Industrial Eng. University of Arizona for 36<sup>th</sup> WDSI conference, 2007.
- Selected and awarded PhD thesis nationwide, 2008, Iranian Students Book Agency, ISBA.
- Outstanding graduated student in PhD degree, 2008, Sharif University of Technology.
- Travel Grant from the United Nations University to attend the IHDP Open Meeting 2009, Bonn, Germany.
- Tavakoli Prize for Conducting Original Researches, (2009), Sharif University of Technology, Tehran, Iran.
- The Best Researcher, Faculty of Civil Eng. University of Tabriz, 2009.

- Extraordinary Achievement in EURO working Group on OR for Development, 2010, University of Lisbon, Portugal.
- The Second Best Researcher, Faculty of Civil Eng. University of Tabriz, 2011.
- Certificate of Appreciation from East Azerbaijan Regional Water Company (Iran) for high Scientific and Research Cooperation, 2012.
- Certificate of Appreciation from Iran Ministry of Energy, Water and Wastewater Directory, for presentation in First Seminar on Social Studies for Dam Construction Projects, 29 May 2013.
- Travel Grant from World Climate Research Program and IPCC to attend CORDEX2013.
- The Best Researcher, Faculty of Civil Eng. University of Tabriz, 2015.
- Selected Associate Editor, Journal of Iran Water Resources Research, 2017.
- World's Top 2% Scientists
- Founding Board Member of Iran Hydropolitics Association, 2021.

#### **§ Research Interests (and interested courses for teaching)**

- Integrated Water Resources Management
- Water Governance and Water Policy
- New topics in Hydrology
- Multi-Criteria Decision Making
- Sustainable development
- Aggregation Operators for Information Fusion
- Conflict Resolution between Stakeholders
- System Dynamic (on water resources)
- Systems Engineering of Hydro-systems
- Climate Change and Impacts on Water Resources
- Adaptation to Climate Change
- Decision Making under Uncertainty
- Evolutionary Algorithms
- Water and Energy Nexus
- Sensitive Urban Planning and Design
- Agriculture and rural development.

#### **§ Book**

1. Zarghami M., Szidarovszky F., Multicriteria Analysis: Applications to Water and Environment Management, June 2011, Springer, Berlin.

#### **§ Books (in Farsi)**

2. Ardakanian R., Zarghami M. Managing Water Resources Projects, February 2011, Iranian Students Book Agency, Tehran.
3. Hassanzadeh, Y., Nourani V., Zarghami M. (Eds.), Proceedings of the 3rd Iranian Water Resources Management Conference, October 2008, University of Tabriz, Iran.

4. Mohammad Khorshiddost A., Zarghami M. Green Cities, 2012, University of Tabriz and Research Center of Tabriz City Council, (Translation).

#### **§ Chapters in Books**

5. Zarghami, M., AmirRahmani, M., A System Dynamics Approach to Simulate the Restoration Plans for Urmia Lake, Iran, in M. Akio (Ed.), Optimization and Dynamics with Their Applications, Springer, 2017.
6. Nikjoofar, A., Zarghami, M., Evolutionary Multi-objective Optimization of the Water Distribution Networks; A Case Study from Iran, in X.S. Yang, A.H. Gandomi, S. Talatahari, A.H. Alavi (Eds.), Metaheuristics in Water, Geotechnical, and Transport Engineering, Elsevier, 2013.
7. Zarghami M., Szidarovszky F., Soft Computing in Water Resources Management by Using OWA Operator, in R. Yager, J. Kacprzyk and G. Beliakov (Eds.), Recent Developments in the Ordered Weighted Averaging Operators: Theory and Practice, Springer, 2011, Volume 265/2011, 269-279.

#### **§ Invited speaker in scientific events**

1. "Iran Water Management: challenges and solutions", Iraq's Thirst Program, Bahr Alolom Forum, Najaf, Iraq, 25 Feb. 2023.
2. "Water Diplomacy: Step forward for effective governance", Indo-Iranian Workshop on Water Resources Management, Ferdowsi University of Mashad, 29 Oct. 2020.
3. "Water diplomacy among conflicting stakeholders to balance water-food nexus", Water Management and Food Security in Iran 2020: Online Training, June 29 – July, 3 2020, The Hague Academy for Local Governance.
4. "Reflecting on Iran's water governance and solutions for future", A workshop for Iran-Australia WaterGuide Dialogue, 6-7 January 2017, East Azerbaijan Water Company, Tabriz, Iran.
5. "Engineering Diplomacy: Needed for Success of the Developing Countries", Regional Workshop on "South-South Cooperation for Strengthening Engineering Standards and Mobility of Professionals", 21-22 December 2017, UNESCO Jakarta, Indonesia.
6. "Water Security Needs Interdisciplinary Engineering; Iran's Experience", International High Level Policy Forum and Workshop on Developing the Roadmap on Accreditation of Engineering Qualifications to FEIAP Education Standards in Central Asia Region, 27 to 29 March 2017, Dushanbe, Tajikistan.
7. "Can Water Diplomacy Enable a New Future for the Urmia Lake?", 2nd Congress on Advancement of Science and Technology in Islamic World, 02-03 March 2016, University of Tehran.
8. "Water Diplomat", MIT Water Innovation Prize, 06 April 2015, MIT.
9. "Sustainable Management of Urmia Lake: Is an Engineering Approach Sufficient?", MIT Water Club, MIT, 11 March 2015.
10. "Sustainable Water Resources Management in Fast Developing Regions: Case of Urmia Lake", Environmental and Water Resources Engineering Seminars, Tufts University, 24 Feb 2015.

11. "Soft Water Management for Effective Water Governance in Urmia Lake basin", Urmia Lake Restoration Plan, Tabriz, 21 May 2014.
12. "Tools for Integrated Watershed Management", 4<sup>rd</sup> Workshop of National Plan for Integrated Watershed Management, Shiraz University, 19-20 June 2013.
13. "Social Studies as a Tool for Water Governance", First Seminar on Social Studies for Dam Construction Projects, Iran ICOLD and Iran Ministry of Energy, 29 May 2013, Tehran.
14. "Effective Water Governance of Urmia Lake, Iran", Narvan (NGO) Symposium on Clean Azerbaijan, March 01, 2010, University of Tabriz.
15. "Role of Governments/Public/Civil Society in Sustainable Water use under Climate Change Conditions", International Training Workshop on Sustainable Water Use in Conditions of Climate Change, organized by RCUWM and IARTC, 25-27 July 2011, Izmir, Turkey.
16. "IWRM with Nash Bargaining and Leader-Follower Models: Application to the Zarrinehrud River Basin, Iran", The First International and Third National Conference on Dams and Hydropower in Iran, 8-9 February 2011, Tehran.

## § Papers in peer-reviewed journals

1. Hashemi M., Mazandarani Zadeh H., Zarghami M. Demeke B.W., Taraghi Delgarm R., (2023) An analysis of why rehabilitation and balancing programs for aquifers do not meet water organizations' targets (a case study of the Qazvin aquifer in Iran), *Agricultural Water Management*, 281, 108258.
2. Sadeghi S.H., Sharifi Moghadam E., Zarghami M., and Delavar M., Developing sustainable land-use patterns at watershed scale using nexus of soil, water, energy, and food, *Science of the Total Environment*, in press.
3. Nezami, N, Zarghami, M, Tighdama, M, Abbasi M., (2022). A novel hybrid systemic modeling into sustainable dynamic urban water metabolism management: Case study, *Sustainable Cities and Society*, online.
4. Fouladi Osgouei, H, Zarghami, M., Mosaferi, M. Karimzadeh, S, A novel analysis of critical water pollution in the transboundary Aras River using the Sentinel-2 satellite images and ANNs, *International Journal of Environmental Science and Technology*, 19, 9011–9026.
5. Kobarfard M., Fazl Ola, R., Zarghami M. & Akbarpour A., (2022). Evaluating the uncertainty of urban flood model using glue approach, *Urban Water Journal*, Online.
6. Rashidi M., Zarghami, M., Pishbahar, E., Fallahi, F., (2021) Assessment of coalition in meeting downstream environmental flow based on Shapley value and Nash equilibrium: Case study Aras River Basin, *International Journal of Environmental Science and Technology*, in press.
7. Rashidi, M., Zarghami, M., Pishbahar, E, Fallahi, F. (2021) Multi criteria analysis of power asymmetry in Aras Transboundary River Basin: Deriving potential hydro-hegemon country, *Int. Journal of Water Management and Diplomacy*, in press.
8. Anbari, M.J., Zarghami, M., Nadiri, A. (2021) An uncertain agent-based model for socio-ecological simulation of groundwater use in irrigation: A case study of Lake Urmia Basin, Iran, *Agricultural Water Management*, 249, 106796.
9. Barhagh, S.E., Zarghami, M., Alizadeh Govarchin Gale, Y. Shahbazbegian, M.R. (2021). System dynamics to assess the effectiveness of restoration scenarios for the Urmia Lake: A

- prey-predator approach for the human- environment uncertain interactions, *Journal of Hydrology*, 593, 125891.
10. Janjua, S., Hassan, I. Zarghami, M. Islam, S. (2020), Addressing supply-demand gap in the shared rivers using water diplomacy framework: Utility of game theory in the Indus River within Pakistan, *Water Policy* 22, 789-810.
  11. Atazadeh E., Barton A., Shirinpour, M., Zarghami M. and Rajabifard A. (2020). River management and environmental water allocation in regulated ecosystems of arid and semiarid regions – A review. *Fundamental and Applied Limnology / Archiv für Hydrobiologie*. 193/4, 327–345.
  12. Sadeghi S.H., Sharifi Moghadam E., Delavar M., Zarghami M., (2020) Application of water-energy-food nexus approach for designating optimal agricultural management pattern at a watershed scale, *Agricultural Water Management*, 233, 1-13.
  13. Baghapour M.A., Shooshtarian M.R. Zarghami M. (2020) Process mining approach of a new water quality index for long-term assessment under uncertainty using consensus-based fuzzy decision support system, *Water Resources Management*, 34, 1155–1172.
  14. Sharifi Moghadam E., Sadeghi S.H., Zarghami M., Delavar M., (2019) Water-energy-food nexus as a new approach for the watershed resources management: A review. *Environmental Resources Research*, 7(2), 129-136.
  15. Hashemi M., Mazandarani Zadeh, H., Daneshkare Arasteh, P., and Zarghami M., (2019) Economic and environmental impacts of cropping pattern elements using systems dynamics, *Civil Engineering Journal*, 5(5), 1020-1032.
  16. Ahmadi, M.H., and Zarghami, M. (2019) Should water supply for megacities depend on outside resources? A Monte-Carlo system dynamics simulation for Shiraz, Iran, *Sustainable Cities and Society*, 44, 163-170.
  17. Ebrahimi Sarindizaj, E. and Zarghami, M. (2019) Sustainability assessment of restoration plans under climate change by using system dynamics; Application on Urmia Lake, Iran, *Journal of Water and Climate Change* 10 (4): 938–952.
  18. Alami, M.T., Abbasi, H., Niksokhan, M.H. and Zarghami, M. (2018) Charged system search for optimum design of cost-effective structural best management practices for improving water quality, *International Journal of Optimization in Civil Engineering*, 8(2), 295-309.
  19. Khodadadi M., Tohidi G., Zarghami M., (2017) Sensitivity analysis of the ordered weighted averaging operator via linear models, *Computers & Industrial Engineering* 112, 264-273.
  20. Fouladi Osgouei, H., Zarghami, M., Ashouri, H. (2017), Disaggregating radar-derived rainfall measurements in East Azarbaijan, Iran, using a spatial random-cascade model, *Theoretical and Applied Climatology*, 129(1), 427–435.
  21. Zarghami M., Fotookian MR, Safari N, Aslanzadeh A. (2016) Reservoir operation using system dynamics under climate change impacts: A case study of Yamchi Reservoir, Iran, *Arabian Journal of Geosciences*, 9, 678.
  22. Sadeghfam, S., Hassanzadeh, Y., Nadiri, A., Zarghami M. (2016). Localization of groundwater vulnerability assessment using catastrophe theory, *Water Resources Management*, 30(13), 4585-4601.
  23. Babaeian, I, Modirian, R., Karimian, M., Zarghami, M., (2015). Simulation of climate change in Iran during 2071-2100 using PRECIS regional climate modelling system, *Desert* 20-2, 123-134.



24. Javidi Sabbaghian R., Zarghami, M., A. Pouyan Nejadhashemi, A., Sharifi M.B., Herman, M.R., Daneshvar F., (2015). Application of risk-based multiple criteria decision analysis for selection of the best agricultural scenario for effective watershed management, *Journal of Environmental Management*, 168, 260-272 (IF~3.057).
25. Zarghami, M., Safari, N., Szidarovszky, F., Islam, I. (2015), Nonlinear interval parameter programming combined with cooperative games: A tool for addressing uncertainty in water allocation using water diplomacy framework, *Water Resources Management*, 29: 4285-4303.
26. Mirabi M., Mianabadi H., Zarghami M, Sharifi M.B., and Mostert E., (2014), Risk-based evaluation of wastewater treatment projects: A case study in Niasar city, Iran, *Resources, Conservation & Recycling*, 93, 168-177.
27. Hajiabadi R., and Zarghami M., (2014), Multi-objective reservoir operation with sediment flushing; Case study of Sefidrud Reservoir, *Water Resources Management*. 28, 5357-5376, (IF~2.259).
28. Mianabadi H., Mostert E., Zarghami M., van de Giesen N., (2014), A new bankruptcy method for conflict resolution in water resources allocation, *Journal of Environmental Management*, 144, 152-159, (IF~3.057).
29. Minatour Y., Bonakdari H., Zarghami M., and Ali Bakhshi M., (2014) Water supply management using an extended group fuzzy decision making method: A case study in North-Eastern Iran, *Applied Water Science*, 5(3), 291-304.
30. Amirrahmani M. and Zarghami M., (2015) The use of statistical weather generator, hybrid data driven and system dynamics models for water resources management under climate change, *Journal of Environmental Informatics*, 25(1), 23-35 (IF~3.619).
31. Safari, N., Zarghami, M. and Szidarovszky, F. (2014) Nash bargaining and leader-follower models in water allocation: Application to the Zarrinehrud River basin, Iran, *Applied Mathematical Modelling*, 38, 1959-1968 (IF~1.706).
32. Felfelani, F., Jalali Movahed, A., and Zarghami M., (2013) Simulating hedging rules for effective reservoir operation by using system dynamics: a case study of Dez Reservoir, Iran, *Lake and Reservoir Management*, 29(2), 126-140 (IF~1.041).
33. Amirrahmani M. and Zarghami M., (2013) A new approach to combine climate change projections by ordered weighting averaging operator; Applications to Northwestern Provinces of Iran, *Global and Planetary Change* 102(3), March, 41–50 (IF~3.707).
34. Zarghami, M. and Hajykazemian, H., (2013) Urban water resources planning by using a modified particle swarm optimization algorithm, *Resources, Conservation and Recycling*, 70(1), January, 1-8 (IF~1.759).
35. Hassanzadeh, E., Zarghami, M., and Hassanzadeh Y., (2012) Determining the main factors in declining the Urmia Lake level by using system dynamics modeling, *Water Resources Management*, 26(1), January/February, 129–145 (IF~2.259).
36. Rohaninejad M. and Zarghami, M., (2012) Combining Monte Carlo and finite difference methods for effective simulation of dam behaviour, *Advances in Engineering Software*, 45(1), March, 197-202 (IF~1.422).
37. Zarghami, M. and Akbariyeh, S., (2012) System dynamics modeling for complex urban water systems; Application to the city of Tabriz, Iran, *Resources, Conservation and Recycling*, 60, March, 99-106 (IF~1.759).

38. Zarghami, M., Abdi A., Babaeian I., Hassanzadeh Y., and Kanani R., (2011) Impacts of climate change on runoffs in East Azerbaijan, Iran, *Global and Planetary Change*, 78(3-4), August/September, 137-146 (IF~3.707, Top 25 Hottest Article in this journal July-Sep 2011).
39. Zarghami M. (2011) Effective watershed management; Case study of Urmia Lake, Iran, *Lake and Reservoir Management*, 27(1), March, 87-94 (IF~1.041) (Most read article, 2013-04-13).
40. Mianabadi, H., Afshar, A., and Zarghami M. (2011) Intelligent multi-stakeholder environmental management, *Expert Systems with Applications*, 38(1), January, 862-866 (IF~1.965).
41. Zarghami M. (2010) Urban water management using fuzzy-probabilistic multi-objective programming with dynamic efficiency, *Water Resources Management*, 24(15), December, 4491–4504.
42. Zarghami M. (2011) Soft computing of the Borda count by fuzzy linguistic quantifiers, *Applied Soft Computing*, 11(1), January, 1067-1073 (IF~2.679).
43. Zarghami M. and Szidarovszky F., (2010) On the relation between compromise programming and the ordered weighted averaging operator, *Information Sciences*, 180(11), June, 2239–2248 (IF~3.893).
44. Zarghami M. and Szidarovszky F., (2009) Revising the OWA operator for multi criteria decision making problems under uncertainty, *European Journal of Operational Research*, 198(1), October, 259-265 (IF~1.815).  
Zarghami M. and Szidarovszky F. (2009) Stochastic-fuzzy multi criteria decision making for robust water resources management, *Stochastic Environmental Research and Risk Assessment*, 23(3), March, 329-339, IF~2.673.
45. Zarghami M., Szidarovszky F., and Ardakanian R. (2009) Multi attribute decision making on inter-basin water transfer projects, *Scientia Iranica, Transaction E*, 16(1), January-June, 73-80.
46. Szidarovszky F., Zarghami M. (2009) Combining Fuzzy quantifiers and neat operators for soft computing, *Iranian Journal of Fuzzy Systems*, 6(1), February, 15-25.
47. Zarghami M., Szidarovszky F. and Ardakanian R., (2008) Sensitivity analysis of the OWA operator, *IEEE Transactions on Systems, Man and Cybernetics-Part B*, 38(2), April, 547-552.
48. Zarghami M. and Szidarovszky F. (2008) Fuzzy quantifiers in sensitivity analysis of OWA operator, *Computers and Industrial Engineering*, 54(4), May, 1006-1018 (IF~1.589)..
49. Zarghami M., Abrishamchi A. and Ardakanian, R. (2008) Multi-criteria decision making for integrated urban water management, *Water Resources Management*, 22(8), August, 1017-1029.
50. Zarghami M., Szidarovszky F., and Ardakanian R. (2008) A fuzzy- stochastic OWA model for robust multi-criteria decision making, *Fuzzy Optimization and Decision Making*, 7(1), March, 1-15, IF~1.0.
51. Zarghami M., Ardakanian R., Memariani A. and Szidarovszky F. (2008) Extended OWA operator for group decision making on water resources projects, *Journal of Water Resources Planning and Management, ASCE*, 134(3), May/June, 266-275.
52. Zarghami, M., Ardakanian, R. and Memariani, A. (2007), Fuzzy multiple attribute decision making on inter-basin water transfers, case study: transfers to Zayanderud basin in Iran, *Water International*, 32(2), June, 280-293.

53. Zarghaami, M. (2006) Integrated water resources management in Polrud irrigation system, *Water Resources Management*, 20(2), April, 215-225.

### **Technical Reports**

1. Hettiarachchi, H. and M. Zarghami. The Nexus Approach in Environmental Resources Management. Proceedings, Iran, 12–13 November 2017. Dresden: United Nations University Institute for Integrated Management of Material Fluxes and of Resources (UNU-FLORES).
2. Zarghami, M., and H. Montgomery “A Discussion Panel on Urmia Lake: Adaptive Solutions under Climate Change?”, University of Tabriz, Nov. 2016.
3. Green J. et al. Water Test Kits in Ahmedabad, India, Comprehensive Initiative on Technology Evaluation at the Massachusetts Institute of Technology, August 2016.
4. Zarghami, M., and S. H. Alemohammad, Can Water Diplomacy Enable a New Future for the Urmia Lake?, Tufts Water Diplomacy Program and Iranian Studies Group at MIT, Aug. 2015.
5. Zagharmi M., K. Tsai Ku , Liu Y., S. Shabab, M. Islam, Urmia Lake: Policy Analysis Group Paper, Harvard Kennedy School of Government, May 12. 2015.

### **Peer-reviewed Journal papers in Farsi**

In Farsi CV

### **§ Papers in conferences proceedings**

1. Sabri, S., Zarghami, M., Development of uncertain bankruptcy models for groundwater management in damghan plain, Iran, *Transboundary Aquifers: Challenges and the way forward*, 06-09 Dec. 2021, UNESCO, Paris.
2. Anbari, M.J., Zarghami, M., An Agent-Based Model for Considering Complexity in Groundwater Resources Systems: A Case Study of Urmia Lake Basin, *The 2nd International Conference on Water Resources in Arid Areas*, November 9-11, 2020, Muscat, Oman.
3. Karimi Sangchini, E., Ownegh M., Sadoddin A., Zarghami M., An integrated system dynamics model to predict the effects of management scenarios on economic assessment of water and soil resources in Hableh-Rud River Basin, Iran, *The 2nd International Conference on Water Resources in Arid Areas*, November 9-11, 2020, Muscat, Oman.
4. Bolouri, F. & Zarghami, M. “Assessing the Sustainability of a Campus by Simulating Green Strategies based on SDGs”, *8th Annual International Conference on Sustainable Development*, September 21-22, 2020, New York, USA (online).
5. Zarghami, M., Alemohammad, H., Islam, S., Can Water Diplomacy Enable a New Future for the Urmia Lake? *2016 Nairobi Conference on Earth System Governance on Confronting Complexity and Inequality*, 7-9 December 2016.
6. Zarghami, M., Supporting Poor Communities in Environmental Complex Problems: A new Approach of Water Parliament, *2016 Nairobi Conference on Earth System Governance on Confronting Complexity and Inequality*, 7-9 December 2016.
7. Ebrahimi Sarindizaj, E., Zarghami, M., Developing system dynamics model for assessing restoration plans in water management; Case study Urmia Lake, Iran, *1<sup>st</sup> International*

- Conference on Water, Environment and Sustainable Development, September 27-29, 2016, Ardabil, Iran.
8. Zarghami M., Fotookian M.R., Safari N., and Aslanzadeh A., Reservoir operation using system dynamics under climate change impacts: A case study of Yamchi Reservoir, Iran, International Water Conference 2016: Water Resources in Arid Areas, March 13-16, 2016, Muscat, Oman.
  9. Zarghami, M. and Amirrahmani, M., Toward effective water diplomacy by using system dynamics: Case study, The 33rd International Conference of the System Dynamics Society, Cambridge, Massachusetts, USA, July 19 – July 23, 2015.
  10. Javidi Sabbaghian, R., Nejadhashemi, A.P., Zarghami, M., and Sharifi, M. B. Risk-based multiple criteria decision analysis for ranking climate change mitigation scenarios: Case study of Saginaw Watershed, ASABE 1st Climate Change Symposium: Adaptation and Mitigation, May 3-5, 2014, Chicago, Illinois, USA.
  11. Sephidi, M. R., and Zarghami, M. Optimization of water distribution network using genetic algorithms, simulated annealing and game theory. 10<sup>th</sup> International Congress on Civil Engineering, 5-7 May 2015, University of Tabriz, Tabriz, Iran.
  12. Javidi Sabbaghian, R., Nejadhashemi, A.P., Zarghami, M., and Sharifi, M. B. Developing a fuzzy group decision making framework for managing water resources risk. Environmental Risk and Decision Making Symposium, 10 October 2014, East Lansing, Michigan, USA.
  13. Zarghami M., Anbari M.J. and PorAli A., Effective watershed management considering the sustainability of the Urmia Lake using system dynamics, 34<sup>th</sup> International Symposium of the North American Lake Management Society, 11-14 Nov. 2014, Tampa, Florida, USA.
  14. Fouladi Osgouei H. and Zarghami M., The study and modeling of rainfall spatial and temporal changes in East Azarbaijan, Iran, 21<sup>st</sup> Century Challenges in Regional Climate Modelling Workshop, 16-19 June 2014, Lund, Sweden.
  15. Zarghami M. and Amirrahmani M., A new approach to combine climate change projections by ordered weighting averaging operator; Applications to Northwestern region of Iran, International Conference on Regional Climate, CORDEX 2013, 4-7 Nov. 2013, Brussels.
  16. Zarghami M. and Shirkhorshidi S.R., The study of climate change impacts on reservoir operation: A case study, International Conference on Regional Climate, CORDEX 2013, 4-7 Nov. 2013, Brussels.
  17. Mianabadi H., Mostert E., Zarghami M., Giesen N., Transboundary water resources allocation using bankruptcy theory; Case study of Euphrates and Tigris Rivers, Transboundary water management across borders and interfaces: present and future challenges, 16-20 March 2013. Aveiro, Portugal.
  18. Nikjoofar, A., Sephidi, M.R., Zarghami, M., and Ahmadi, M.H., Multi-objective assessment for non-revenue water reduction; Case study from Iran, 6<sup>th</sup> International Perspective on Water Resources and the Environment, ASCE/EWRI, 7-9 January 2013, Izmir, Turkey.
  19. Jodeyri, L., and Zarghami, M., Impacts of climate change on water resources of the Sefidrud Basin (Iran), 6<sup>th</sup> International Perspective on Water Resources and the Environment, ASCE/EWRI, 7-9 January 2013, Izmir, Turkey.
  20. Sephidi, M.R., and Zarghami, Optimization of raw water network for landscape development by using genetic algorithm in GIS environment; Case study: A district in Tabriz city, 6<sup>th</sup> International Perspective on Water Resources and the Environment, ASCE/EWRI, 7-9 January 2013, Izmir, Turkey.

21. Nikjoofar, A., and Zarghami, M., Bi-objective optimization of the water distribution networks by genetic algorithm; application to Tabriz City, IWA World Water Congress and Exhibition, 16–21 September 2012, Busan, Korea.
22. Esmaeeli A., Baghban AsghariNejad H., and Zarghami M., Ranking the seawater desalination methods by using multi criteria decision making approaches, 25<sup>th</sup> European Conference on Operational Research, 8-11 July 2012, Vilnius, Lithuania.
23. Amirrahmani M. and Zarghami M., Studying climate change condition by wavelet-ANN and system dynamics approaches; Zola reservoir, Iran, The First International and Third National Conference on Dams and Hydropower in Iran, 8-9 February 2011, Tehran.
24. Zarghami M. and Safari N., Conflict resolution on water demands from Shahid Kazemi reservoir by a cooperative game theory, The First International and Third National Conference on Dams and Hydropower in Iran, 8-9 February 2011, Tehran.
25. Zarghami, M. and Amirrahmani M., Aggregation of climate change predictions; Case study from semi arid parts of Iran, IWA World Congress on Water, Climate and Energy, 13-18 May 2012, Dublin, Ireland.
26. Saffari, N., Zarghami, M. and Szidarovszky, F. Water allocation by the leader-follower model; Application to the Zarrinehrud River basin, Iran, 5<sup>th</sup> International Perspective on Water Resources and the Environment, ASCE/EWRI, 5-7 January 2012, Marrakech, Morocco.
27. Zarghami, M. and Amirrahmani, M., The study of climate change impacts on the semi-arid basin of Zolachay, Iran, 5<sup>th</sup> International Perspective on Water Resources and the Environment, ASCE/EWRI, 5-7 January 2012, Marrakech, Morocco.
28. Zarghami, M., Akbarieh S., Bagheri A. and Behjat S., Modeling urban water management by using System Dynamics; Case study of Tabriz city, Iran, Computing and Control for the Water Industry 2011, Urban Water Management - Challenges and Opportunities, 5-7 September 2011, University of Exeter, United Kingdom.
29. Zarghami, M. and Hajykazemian H., Effective urban water management by using an improved particle swarm optimization, Computing and Control for the Water Industry 2011, Urban Water Management - Challenges and Opportunities, 5-7 September 2011, University of Exeter, United Kingdom.
30. Zarghami, M., Sustainable urban water planning by using soft multi-objective computing, 4<sup>th</sup> ASCE-EWRI International Perspective on Water Resources & the Environment, 4–6 January 2011, National University of Singapore, Singapore.
31. Zarghami, M., Multi-stakeholder management of the national water and wastewater projects, IWA World Water Congress and Exhibition, 19–24 September 2010, Montreal, Canada.
32. Zarghami M., Hajykazemian H., Eghbaal V., Comparing the Metaheuristics and Gradient Based Approaches in Multi-objective Urban Water Management, 24<sup>th</sup> European Conference on Operational Research, 11-14 July 2010, Lisbon, Portugal.
33. Zarghami M., Hassanzadeh E., Hassanzadeh Y., System dynamics modeling for the Urmia saline lake management, 24<sup>th</sup> European Conference on Operational Research, 11-14 July 2010, Lisbon, Portugal.
34. Zarghami M., Environmental planning with OR solutions in a developing country; Case study of Urmia Lake, Iran, A EURO ORD Workshop on OR for Developing Countries - Young

Researchers and PhD Symposium, University of Lisbon, Portugal, July 10, 2010 (received "Extraordinary Achievement as a Euro ORD Junior Fellow").

35. Zarghami M., Operation of multi-objective multi-reservoir system under climate change complexities, AGU-Chapman Conference on Complexity and Extreme Events in Geosciences, 15-19 Feb. 2010, Hyderabad, India.
36. Zarghami, M., Effective water governance by using decision support systems, case study: Uremia Lake basin, Iran, Amsterdam Conference on the Human Dimensions of Global Environmental Change, 2-4 December 2009, Amsterdam/Volendam, Netherlands.
37. Zarghami, M., Hassanzadeh Y., Babaeian I. and Kanani R., Climate change and water resources vulnerability; Case study of Tabriz City, SENSE Symposium on Climate Proofing Cities, 1 December 2009, Amsterdam/Volendam, Netherlands.
38. Zarghami, M., Afsharifard A. Multi-criteria ranking by a new social choice method, 20<sup>th</sup> International Conference on Multiple Criteria Decision Making, 21-26 June 2009, Chengdu/Jiuzhaigou, China.
39. Zarghami, M., Ardakanian R. and Szidarovszky, F. Systems innovative in ranking water transfer projects, 7<sup>th</sup> International Science Conference on the Human Dimensions of Global Environmental Change, "Social Challenges of Global Change" (IHDP Open Meeting 2009), 26-30 April 2009, Bonn, Germany.
40. Zarghami, M., and Szidarovszky F., Group decision support system for ranking of water resources projects, The 3<sup>rd</sup> International Conference on Water Resources and Arid Environments and the 1st Arab Water Forum, The King Fahd Cultural Center, Riyadh, Saudi Arabia, 16-19 November 2008.
41. Zarghami, M., and Szidarovszky F., New approach in obtaining OWA weights for multi criteria decision making, Proc. of the 8<sup>th</sup> International FLINS Conference on Computational Intelligence in Decision and Control, 21-24 September 2008, Madrid, Spain, pages 501-506, World Scientific press.
42. Zarghami, M., Szidarovszky, F. and Ardakanian R Robust water resources management by using fuzzy-stochastic OWA operator, The 4<sup>th</sup> National Conference on Civil Engineering, 6-8 May 2008, University of Tehran, paper no. 60.
43. Zarghami, M., and Szidarovszky, F. Using OWA operators to explain compromise programming method, 19th International Conference on Multiple Criteria Decision Making, 7-12 January 2008, Auckland, New Zealand, page(s) 141-142.
44. Zarghami, M., Ardakanian R. and Szidarovszky, F. Obtaining robust decisions under uncertainty by sensitivity analysis on OWA operator, IEEE Symposium on Computational Intelligence in Multicriteria Decision Making, Honolulu, Hawaii, 1-5 April 2007, art. no. 4223017, Page(s):280 - 287.
45. Zarghami, M. Ardakanian, R. Memariani, A. and Szidarovszky, F. Multi-stakeholder water resources management problem using improved OWA operator, Proc. Of 36<sup>th</sup> WDSI, 2007 Denver, USA (3-7 April)# 146.
46. Zarghami, M. Ardakanian, R. and Szidarovszky, F Sensitivity analysis of an information fusion tool: OWA operator, Proc. of Multisensor, Multisource Information Fusion: Architectures, Algorithms, and Applications 2007, SPIE Vol 6571, Orlando, USA (11-12 April) # paper no. 65710P.

47. Zarghami M. and Szidarovszky F., Stochastic-fuzzy multi criteria decision making for robust water resources management, 17<sup>th</sup> Annual El Dia Del Agua Showcase, March 1, 2007 (Poster), University of Arizona, Tucson, AZ, USA.
48. Zarghami, M. A. Salavitarab (2006) A system dynamics approach for integrated urban water management, the 24<sup>th</sup> International Conference of the System Dynamics Society, July 23 – 27, 2006, Nijmegen, the Netherlands.
49. Zarghami, M. (2005), Hierarchy of criteria for integrated water resources projects prioritisation. 15<sup>th</sup> Stockholm Water Symposium, World Water Week, 21-27 August 2005, Stockholm, Sweden.
50. Zarghami, M. (2005) Uncertain Criteria in Ranking Inter-basin Water Transfer Projects in Iran, 73rd Annual Meeting of ICOLD, 1-6 May 2005, Tehran, Iran.
51. Zarghami, M., A. Abrishamchi and R. Ardakanian, (2005), Multi-criteria decision making for integrated urban water management, Sustainable Water Management Solutions for Large Cities (Proceeding of Symposium S2 held during the Seventh IAHS Scientific Assembly at Foz do Iguacu, Brazil, April 2005). IAHS Publication 293.
52. Zarghami, M. (2005), Ranking of structural projects for water resources management in Iran. Second Alternative World Water Forum, 17-20 March 2005, Geneva, Switzerland.
53. Zarghami, M., M., Doroodian, M. Salavitarab, A. (2003), Conflict resolution in irrigation systems. 14-19 Sep., 54<sup>th</sup> ICID conference, Montpellier, France.
54. Salavitarab, A., Zarghami, M. (2002), Inter-basin water transfer in Iran, proposal of a project, Iranian-Netherlands joint conference on Integrated Water Resources Management, 22 July 2002 Tehran.

#### **Conference papers presented in Farsi**

39 items in Farsi CV

#### **§ Research grants**

- University of Tabriz, 2008
- Iran National Elites Organization, 2010.

#### **§ Research activities**

- 2014-2015, Integrated comparison of rural water distribution of dual network, bottled water and traditional single network, East Azerbaijan Province Rural Water and Wastewater Company.
- 2014-2015, A system dynamics model to optimum management of supply and demands of Yamchi reservoir for the Ardabil Regional Water Company.
- 2013-2014, The study and modeling of rainfall spatial and temporal changes in East Azarbaijan, Iran for the East Azerbaijan Regional Water Company.
- 2013-2015, Suggestion of efficient local water market structures for the Osku regions, East Azarbaijan, According national and international experiences
- 2013, Technical, Economical and Environmental Evaluation of Different Pipes for Efficient Selection of Them for Water Supply Projects, East Azerbaijan Province Rural Water and Wastewater Company.

- 2012-2013, Improving the Reliability of Tabriz Urban Water System in Passive Defense, Funded by Iran Elites Foundation.
- 2012-2013, Identifying the fields for performance improvement of the company (with focus on the non revenue water reduction approach), East Azerbaijan Province Rural Water and Wastewater Company.
- 2011-2012, Comparing the different desalination methods, considering energy consumption and environmental criteria, University of Tabriz.
- 2010-2011. Modeling Urban Water Supply and Demand for Tabriz City in the Horizon 2020, Using System Dynamics; Funded by Iran Elites Foundation.
- 2011-2012, Advisor for Water Allocation Project in the Aras Basin by System Dynamics Modeling, Azarkavab Consulting Eng.
- 2009-2010, Managing the research "Climate Change Projection and its Impacts on Runoff of Some Watersheds in East Azerbaijan Province, Iran" for the East Azerbaijan Regional Water Company.
- 2008-2009, Managing the research entitled "Soft computing the Borda count", with the research department of the University of Tabriz.
- 2006-2007: Research assistant, Systems and Industrial Engineering Dept., University of Arizona.
- 2001-2001: Member of group: urban water management of Zahedan city, civil engineering dept., SUT.
- 2007-2009: Developing Group Decision Support System for Water Resources Projects Management in Watershed Scale, Mahab Ghodss Consulting Engineering.
- 2003- 2005: Head of project, Ranking National Water Resources Projects, Iran Water Resources Management Company, Ministry of Energy, Iran.
- 2003, Multi-criteria decision making for wastewater plans of Jiroft city, Mahab Ghodss Consulting Engineering.
- 2003, Multi-criteria decision making of water allocation for irrigation in Polrud basin, Mahab Ghodss Consulting Engineering.
- 2003, System dynamic model for Tehran urban water, supported by Deputy of Research, Iran Water Resources Management Company, Ministry of Energy, Iran (With Dr. Salavitar and Prof. Abrishamchi).
- 2001, Multi-criteria decision making for water transfer alternatives to Kerman city, Mahab Ghodss Consulting Engineering.

#### **§ Supervisor/Advisor of MSc thesis**

1. Iman Ehsani, Fuzzy multicriteria analysis in water transfer management, case study: Inter basin transfers to Urmia Lake basin, Faculty of Civil Engineering, University of Tabriz, Jan. 11, 2010.
2. Roya Amanpour, Integrated urban water management by using multi-objective optimization, case study of Tabriz city, Faculty of Civil Engineering, University of Tabriz, Dec. 12, 2009.
3. Naeeme Abolvaset, Optimal operation of a multi-objective multi-reservoir system, Case study: Sefidrud watershed, Faculty of Civil Engineering, University of Tabriz, (advisor) Dec. 25, 2008.



4. Ali Nikjoofar, Bi-objective optimization of the Sahand Urban water distribution network using genetic algorithm and game theory, Faculty of Civil Engineering, University of Tabriz, Sep. 15, 2010.
5. Elmira Hassanzadeh, Partitioning impacts of climate and hydraulic structures on water level of Urmia Lake, M.Sc. Thesis, Faculty of Civil Engineering, University of Tabriz, Sep. 15, 2010.
6. Hassan Hajykazemian, Reliability based optimization of water supply and demand by using improved PSO, Case study of Tabriz city, Faculty of Civil Engineering, University of Tabriz, Oct. 25, 2010.
7. Mahmood Rashidi, Multipurpose multi-reservoir optimization with meta-heuristic algorithms, case study: Ghezeloan Watershed, Faculty of Civil Engineering, University of Tabriz, Dec.12, 2010.
8. Seyyed Amirreza Salamat, Ranking of climate change adaptation alternatives using compromise programming, Faculty of Civil Engineering, University of Tabriz, (advisor) May, 22, 2011.
9. Nasim Saffari, Allocation of surface waters in the Zarrinehrud river among the stakeholder provinces by using game theory, Faculty of Civil Engineering, University of Tabriz, July 18, 2011.
10. Simin Akbarieh, A system dynamics modeling of the water resources Systems; applications on Tabriz City, Iran, Faculty of Civil Engineering, University of Tabriz, July 19, 2011.
11. Amir Hossein Javidi Asl, Evaluation the impact of climate change on discharge of Sufichai basin (Iran) by using artificial neural networks, Faculty of Civil Engineering, University of Tabriz, (advisor) August 21, 2011.
12. Mohammad Amirrahmani, Climate change impacts assessment on Zolay Chay Basin by system dynamics and artificial neural network approaches, Faculty of Civil Engineering, University of Tabriz, December 31, 2011.
13. Ali Poshtpanah, Forecasting the dynamic module of mixture asphalts by using artificial neural networks, Faculty of Engineering, Int. Imam Khomeini University, (advisor) March 05, 2012.
14. Mohammad Reza Sephidi, Optimization of raw water network for landscape development by GA in GIS environment; Case study: district 9 in Tabriz city, Faculty of Civil Engineering, University of Tabriz, September 08, 2012.
15. Lila Jodeyri, Modelling the impact of climate change on hydropower generation; Case study: Sefidrud dam, Faculty of Civil Engineering, University of Tabriz, September 09, 2012.
16. Sayadolah Pouryousef, Impact of climate change on the performance of pressurized networks: Case study of Sattarkhan Dam, Faculty of Agriculture, University of Tabriz, February 04, 2013.
17. Seyedeh Roxana Shirkhorshidi, The impact of climate change on Sabalan Reservoir inflows and simulation of the reservoir operation, Faculty of Civil Engineering, University of Tabriz, February 05, 2013.
18. Reza Lotfollahi, A decision support system for risk management of earth dams by using systems dynamics, Faculty of Engineering, IAU, Science and Research Branch of Tehran, (advisor) July 23, 2013.
19. Mahdi Tarlani Azar, Investigation of capability and efficiency of machine learning methods in urban water demand forecasting, Faculty of Civil Engineering, University of Tabriz, September 03, 2013 (co-supervisor).

20. Reza Hajiabadi, Sediment management in reservoirs with optimization of outlet flow with evolutionary algorithms, Faculty of Civil Engineering, University of Tabriz, September 04, 2013.
21. Behzad Paknahad, Water resources planning by multi purpose system dynamics model, Faculty of Civil Engineering, University of Tabriz, September 11, 2013.
22. Soheila Pourghasem, Evaluation of groundwater level of Tabriz plain by remote sensing, Faculty of Geography, University of Tabriz, (advisor) February 17, 2014.
23. Hamed Fathipour, Assessing the impact of climate change on water resource systems using artificial neural network (case study: several reservoir dam in west Azerbaijan), Faculty of Agriculture, Urmia University, March 16, 2014.
24. Somayeh Baghbani, Hard and soft consensus assessment in group fuzzy decision-making on the type of water distribution pipes: Case study of less populated areas at East Azarbaijan, Iran, Faculty of Civil Engineering, University of Tabriz, July 27, 2014.
25. Hamid Vatandost, A developed simulation-optimization model for flood management in Garesu River, Iran, Faculty of Civil Engineering, University of Tabriz, July 28, 2014.
26. Ali Poral, Conjunctive use of surface water and groundwater resources of Salmas Plain with considering the Zola and Derik Dams, Faculty of Civil Engineering, University of Tabriz, Sept. 01, 2014.
27. Zeinab Abedi, Assessment of future climate change impacts on monthly stream discharge using SWAT model in Hervichai watershed, East Azarbaijan Province, Faculty of Natural Resources, Urmia University, (co-supervisor) March 02, 2015.
28. Reza Samadzadeh Fahim, The Simulation of the Effects of New Dikes to Reduce the Evaporation Area: Case study of Urmia Lake, Faculty of Civil Engineering, University of Tabriz, (co-supervisor) Sep. 08, 2015.
29. Ehsan Moradi, Presenting a system dynamics model to simulate desertification (Case Study: Lamerd Region), Faculty of Natural Resources, Urmia of Tehran, (co-adviser) Sep. 21, 2015.
30. Morteza Eghtetaf, Impact of climate change on the quantity and quality of surface water resources (case study: Balikhli Chay River), Faculty of Civil Engineering, University of Shahrud, (co-supervisor) Dec. 14, 2015.
31. Ramin Jafarzadeh, Multi-Criteria Analysis of Various Water Supply Methods in Rural Areas: Case Study of Gharetapeh Village of Marand, Iran, Faculty of Civil Engineering, University of Tabriz, (co-supervisor) Jan. 05, 2016.
32. Elham Ebrahimi, Assessing Sustainability of Ecological Restoration Policies under Climate Change by Using System Dynamics; Application on Urmia Lake, Iran, Faculty of Civil Engineering, University of Tabriz, Jan. 05, 2016.
33. Mohammad Reza Fotookian, Dynamic Operation of Yamchi Dam (Iran) Using Sustainable Development Approach to Supply Environmental Demand and Optimum Cropping Pattern, Faculty of Civil Engineering, University of Tabriz, Jan. 17, 2016.
34. Arezoo Ayremloo, Reservoir Operation of Balikhlichay River (Iran) by Using System Dynamics Approach, Faculty of Civil Engineering, University of Tabriz, (co-supervisor) Jan. 30, 2016.
35. Mahsa Ghasemzadeh, The Effect of Hydrometeorological Parameters on Urmia Lake's Water Level Using Wavelet Coherence Measure, Faculty of Civil Engineering, University of Tabriz, (adviser) August 27, 2016.

36. Amir Sagha Marouf, Management of Water-Energy Nexus in Distribution Networks with Evolutionary Multi-Objective Optimization Considering Environmental Conditions, Faculty of Civil Engineering, University of Tabriz, (supervisor) Sept. 05, 2016.
37. Shahram Dehghani, Modeling urban sewer system with SWMM model and development of management strategies based on green city approach; case study, Faculty of Civil Engineering, University of Tabriz, (supervisor) Sept. 06, 2016.
38. Mohammadreza Shooshtarian, Water Quality Index Modification and Customizing by Using Multi- Criteria Group Fuzzy Decision Making Approach: A Case Study of Drinking Water Wells in Shiraz, School of Health, Shiraz University of Medical Sciences, 14 Sep. 2016 (advisor).
39. Melanne Rouw, Socially navigating through the Lake Urmia debate; Framing analysis of a shrinking Salt Lake in north-western Iran, Wageningen University, 07 Feb. 2017 (co-supervisor).
40. Ali Abbasi, System Dynamics Modeling for Reservoir Operation of the Sattarkhan Dam, Faculty of Civil Engineering, University of Tabriz, 07 Feb. 2017 (advisor).
41. Maryam Javan Salehi, Developing Model Predictive Control Strategies to Manage Urban Water Distribution Network: Case study Zarinehrud water transfer Line to Tabriz, Faculty of Civil Engineering, University of Tabriz, 06 Sep. 2017.
42. Saeid Najjar Ghabel, Agent-based Modeling for Sustainable Groundwater Management in Ardabil Plain, Faculty of Civil Engineering, University of Tabriz, 11 Sep. 2017.
43. Reza Rahbar, Optimum Water Allocation in Transboundary Rivers Based on the Bankruptcy Approach, Case Study: Aras-Kura Basin, Faculty of Civil Engineering, University of Tabriz, 12 March 2018.
44. Behnam Sami, Multicriteria Evaluation of Solar Desalination Systems by Using Reverse Osmosis-Photovoltaic Method: For Less Populated Areas of Ardabil Plain, Faculty of Civil Engineering, University of Tabriz, 5 September 2018.
45. Sina Masoumzadeh, Forecasting snow area of Hirmand basin using remote sensing to improve hydropolitics of Iran and Afghanistan, Faculty of Civil Engineering, University of Tabriz, 8 September 2018.
46. Mohamm Amin Kazemi, Environmental Conflict Resolution by Using Devising Seminars and Group Decision Making; Case Study: Shabestar Plain, Iran, Faculty of Civil Engineering, University of Tabriz, 10 September 2018.
47. Amin Sadeghi, Assessment of Potential Reference Crop Evapotranspiration Trend of Ghezel Ozan River Basin under Climate Change Conditions, Faculty of Agriculture, 22 Oct. 2018 (advisor).
48. Seyed Ershad Barhagh, Assessing the Impact of Agricultural Development on Urmia Lake Level: Providing Strategy Based on Prey and Predator System Model, Faculty of Civil Engineering, University of Tabriz, 04 September 2019.
49. Soheil Safari, Multi-criteria assessment of treatment systems to provide and recycle the water of sports' complex Qanats at the University of Tabriz, Faculty of Civil Engineering, University of Tabriz, 04 September 2019.
50. Farid Shoarinejad, Investigating the Wastage in Analyzing the Water Distribution Network of University of Tabriz and its Improvement by Simulation-Optimization Approach, Faculty of Civil Engineering, University of Tabriz, 25 December 2019.

51. Parisa Valizadeh, Developing Water Diplomacy Scenarios in the Tigris Basin to Restore Hawizeh Marshes, Faculty of Civil Engineering, University of Tabriz, 04 February 2020.
52. Mohammad Reza PourKhalil, Transboundary Water Quality Management Using Game Theory; Case Study: Aras River, Faculty of Civil Engineering, University of Tabriz, 19 August 2020.
53. Arash Taghipour Zarei, Multi-Criteria Group Decision Analysis of Sustainable and Healthier Diets and Policies for Advocating the Selected Diet, Faculty of Civil Engineering, University of Tabriz, 19 September 2020.
54. Ata Karimkhani Nia, Multi Objective Design of Dual Water Distribution Network for Student Residential at the University of Tabriz, Faculty of Civil Engineering, University of Tabriz, 20 September 2020.
55. Sina Jafary Vaighan, a study on water consumption reduction approach by choosing alternative livelihoods using group decision making in Shabestar plain. Faculty of Civil Engineering, University of Tabriz, 20 September 2020.
56. Keyvan Mousavifar, Optimal design of urban wastewater network by using the imperialist competitive algorithm and comparing it with the designed model in SewerGEMS – case study of Elahiye Town, Tabriz, Faculty of Civil Engineering, University of Tabriz, 18 November 2020.
57. Farhad Bolouri, Sustainable Development Strategies of University of Tabriz with System Dynamics Approach and Prioritizing Sustainable Development Strategies Using Group Multi-Criteria Decision Making Tool, Faculty of Civil Engineering, University of Tabriz, 20 September 2020.
58. Ali Sahebghalam, Decision Making on Less Water Dependent Entrepreneurship Strategies in Akhund Qeshlaq Village in Bonab (Iran) Using SWOT Method, Faculty of Civil Engineering, University of Tabriz, 23 January 2021.
59. Hossein Zarei, Multi Criteria Decision Analysis for Agricultural Water conservation with Rural Participation, Case Study, Shiraz Village of Ajabshir, Iran, Faculty of Civil Engineering, University of Tabriz, 23 January 2021.
60. Raziye Jabbari, Developing an Agent-Based Model for Analyzing and Managing Farmers' Behavior to Restore Groundwater Resources; Case Study of Damghan Plain, Iran, Faculty of Civil Engineering, University of Tabriz, 23 January 2021.
61. Samaneh Sabri, Developing Uncertain Bankruptcy Models for Fair Adjustment of Groundwater Licenses in Damghan Plain, Iran, Faculty of Civil Engineering, University of Tabriz, 03 Oct. 2021.
62. Mohammad Hosein Behrozi Lak, Assessing Water Quality Rehabilitation Plans at the River Using Multi-Criteria Group Decision Analysis (Case study: Ajichay River), Faculty of Civil Engineering, University of Tabriz, 29 June 2022.
63. Amin Karbasi Ahvazi, Multi-Criteria Group Decision Making for Surface Water Quality Rehabilitation Projects; Case Study of Haraz River, Faculty of Civil and Env. Engineering, Amirkabir University of Technology, 16 July 2022.

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#### **§ Supervisor/Advisor of PhD thesis**

1. Maryam Khodadai, Determining the weights using data envelopment analysis and ordered weighted averaging operator and their applications, Islamic Azad University of Central Tehran Branch, Department of Mathematics, (advisor) February 22, 2014.
2. Hadi Sanikhani, River flow prediction using the nearest neighbor algorithm based on complexity measure and probabilistic ensemble method, Faculty of Agriculture, University of Tabriz, (advisor) May, 2015.
3. Tahereh Jalali Ansaroodi, Analysis of climate change impacts on ground water level in selected subbasins of Urmia Lake, Iran, Faculty of Geography and Planning, University of Tabriz, (co-advisor) Sep. 09, 2015.
4. Mohammad Noori, Multi Reservoirs Multi Objective Water Resources Systems Management Using Optimization Models, Civil Engineering Department, Ferdowsi University of Mashad, (advisor) October 05, 2015.
5. Sina Sadeghfam, Stochastic, Quantitative and Qualitative Modeling and Risk Assessment of Aquifer of Maragheh-Bonab's Plain, Faculty of Civil Engineering, University of Tabriz, (co-advisor) Sept. 04, 2016.
6. Nasim Safari, Optimal Water Resources Allocation by Public and Market-Based Mechanisms with the Approach of Cooperative Game; Case Studies, Faculty of Civil Engineering, University of Tabriz, (supervisor) Sept. 07, 2016.
7. Reza Javidi Sabaghian, Developing a Fuzzy Heterogeneous Multi-Attribute Group Decision-Making under Uncertainties and Risk Analysis; Application for Effective Watershed Management, Ferdowsi Faculty of Engineering, University of Mashhad, (co-supervisor) April 12, 2017.
8. Habibeh Abbasi, Water Quality and Quantity Management of Reservoir and Selecting Optimal Scenarios of Operation by Watershed Approach and Using Best Management Practices, Faculty of Civil Engineering, University of Tabriz, (advisor) 10 Sept. 2018.
9. Mohammad Hosein Ahmadi, Optimization and Dynamic Simulation of Urban Water Solutions for Landscape Development in Uncertain Conditions, Faculty of Civil Engineering, University of Tabriz, (supervisor) 30 Jan. 2019.
10. Ali Ebrahimzadeh, Assessment of Earth Dam Overtopping Risk Using System Dynamics and Risk Management, Faculty of Civil Engineering, University of Tabriz, 04 February 2020.
11. Ehsan Sharifi Moghadam, Conceptual Modeling of Soil-Water-Energy-Food Nexus in Adaptive Watershed Management, Faculty of Natural Resources, 11 August 2020, Tarbiat Modares University.
12. Mohammad Javad Anbari, Developing an Agent-Based Simulation Model under Uncertainty Conditions for Effective Governance of Groundwater Resources: Case Studies from Urmia Lake and Kavir Markazi Basins, Iran, Faculty of Civil Engineering, University of Tabriz, 07 February 2020.
13. Mahdmoud Rashidi, Optimum Allocation of Transboundary River Flow based on Game Theory and Environmental Economics: A Case Study of Aras, Transboundary River Basin, University of Tabriz, January 2022.
14. Nima Nezami, Providing Sustainable Urban Water Cycle Management Model with Economic Approach based on System Dynamics, Shahid Beheshti University, August 2022.
15. Hojjat Foladi, Water Quality Assessment of Aras Transboundary River based on Remote Sensing and to provide Cooperative Remediation Policies, University of Tabriz, February 2023.

### **§ Current MSc and PhD students (supervise/advise)**

Milad Ghazilou (University of Tabriz); Seyed Mahmoud Tabataie (Sharif University of Tabriz); Javad Ataie (Imam Khomein Int Univ.); Mahsa Ghotbizadeh (Univ. Tabriz); Ali Hajimoradi (Univ. Tabriz); Soheil Safari (Islamic Azad Univ.).

### **§ Host for sabbatical/ postdoctoral scholars**

- Ebrahim Karimi Sanghchini, PhD candidate from the Gorgan University of Agricultural Sciences and Natural Resources, 2015.
- Melanne Rouw, MSc student, Wageningen University, 2015.
- Dr. Seyed Mohammad Mortazavi Naeini, Oxford University, 2016.

### **§ Courses passed (in PhD)**

- Advanced Engineering Mathematics
- Hydrological Models
- Advanced Water Resources Planning
- Water Resources Systems Planning and Analysis 1 & 2
- Water Quality Management
- System Dynamics
- Reliability and Risk Analysis (Water and Energy systems)
- Environmental Management
- Combinatorial Optimization
- Advanced Linear Programming
- Stochastic Hydrology
- Fuzzy Sets Theory
- Game Theory
- Economic Evaluation of Water and Environmental Policy

### **§ Attendance in Courses and Workshops**

- UNESCO-IHE-RCUWM: Strategies of water sector of Iran, May 2002.
- UNESCO-RCUWM: Water conservation with public awareness, May 2003.
- ICID: Application of remote sensing in irrigation, 14-19 September 2003, Montpellier, France.
- Tehran University: Mathematical models for reservoirs operation, June 2004, by Professor D.P. Loucks.
- Research center of Industrial Mathematics of University of Tabriz and Iran Meteorological organization: First joint workshop on mathematical modeling and meteorological forecasting, 18 June 2008, Tabriz, Iran.
- UNESCO-RCUWM: Training of Trainers for Integrated Urban Water Management, 12 Feb. 2006, Tehran.
- Economics of Water Management and Policy, Spring 2007, University of Arizona, by Dr. Bonnie Colby.
- Water Research Institute: RIBASIM, River Basin Simulation Software, from Netherlands.

- Workshop on Multi-Criteria Decision Making for Water Resources and Environment Management, 13 August 2008, University of Tabriz, by professor Ferenc Szidarovszky.
- Principals of Teaching Skills, University of Tabriz, 2009.
- Conservation of Urmia Lake Wetland Workshop. East Azerbaijan Regional Water Company, with professor Eelco van Beek, 2009-11-16.
- Water Distribution System Optimization Using GANetXL/SolveXL, by Prof. Dragan Savic, in 5<sup>th</sup> International Perspective on Water Resources and the Environment, 5-7 January 2012, Marrakech, Morocco.
- Introduction to System Dynamics, Sloan School of Management, MIT, Fall 2014.
- Water Resources Policy and Environmental Studies, Harvard Extension School of Environmental Studies, Fall 2014.
- Big Data Analytics: Time Series Modeling, Geostatistics & Bayesian Statistics, Tufts University, Fall 2014.
- New Hampshire Association of Conservation Commissions, 44<sup>th</sup> Annual Meeting, Conference and Workshops, Inspiring Young Conservationists, Laconia, NH, USA, Nov. 01, 2014.
- Crowds & Climate: From Ideas to Action, Climate CoLab, MIT, Nov. 06, 2014.
- 28<sup>th</sup> Annual University-Wide Conference on Teaching and Learning, Tufts University Grafton Campus, Dec. 11, 2014.
- MIT Water Summit 2014, Dec. 12, 2014.
- Nuts and Bolts of New Ventures/Business Plans, MIT Course 15.S21, January 2015 with Joe Hadzima, MIT Sloan School of Management.
- Water Resources Development and Management: Technology, Economics, Institutions, By Kenneth Strzepek, Harvard Kennedy School of Government, Spring 2015.
- Water and Security in the 21<sup>st</sup> Century, The World Peace Foundation at the Fletcher School, Tufts University, March 04-06, 2015.
- Local Environmental Action 2015, Toxics Action Center and Massachusetts Climate Action Network, Northeastern University, March 15, 2015.
- Licensing & Patents Workshop, Technology Licensing Office, MIT, March 18, 2015.
- Refining Your Pitch Workshop, Martin Trust Center, MIT, March 31, 2015.
- Introduction to Environmental Law and Policy, The University of North Carolina, Chapel Hill, by Donald Hornstein, 2015, (Certificate earned on August 18, 2015).
- The 6<sup>th</sup> Annual WSSS Symposium: Fluid Boundaries: Integrated Solutions to Today's Water Challenges, Tufts University, April 03, 2015.
- Science Diplomacy Workshop, The Fletcher School of Law and Diplomacy, Tufts University, by Paul A. Berkman, April 15-18, 2015.
- Reframing Complex Water Challenges, MIT Water Club and Tufts Water Diplomacy Program, MIT, May 01-02, 2015.
- Successful Negotiation: Essential Strategies and Skills by University of Michigan on Coursera. Certificate earned on July 17, 2015.
- World Climate Facilitator Training Workshop, The International System Dynamics Society Conference, July 23, 2015.
- Global Diplomacy – Diplomacy in the Modern World by University of London and SOAS University of London on Coursera. Certificate earned on July 25, 2016.

- Water Diplomacy, organized by Geneva Water Hub and Iran Ministry of Energy of the IR Iran, School of International Relations, Tehran, 04 May 2019.
- Transdisciplinary Research Summer School, Leuphana University, BOKU and Tbilisi State University, Kazbegi, Georgia, June 30 – July 6, 2019.

## § Courses Taught

### Undergraduate

- Fall term of 2001-2002, Environment, and Operation Research, Islamic Azad University of Iran
- 1995-2007: TA in Sharif University of Technology: Static, Solid mechanics, Hydrology, Water Resources Planning and Management.
- 2007-2012: Statistics, University of Tabriz.
- 2007-2012: Systems Engineering, University of Tabriz.
- 2007-2009: Fluid mechanics lab, University of Tabriz.
- 2009- 2011: English for Industrial Eng. Students, University of Tabriz.
- 2010-now, Hydrology, University of Tabriz.
- 2013-2014, Groundwater Engineering, University of Tabriz.
- 2020-NOW, Hydraulic Structures, AmirKabir University of Technology.

### Graduate (MSc and/or PhD)

- 2011, Water Resources Development Management, Environment Health Engineering Department, Tabriz University of Medical Sciences.
- 2012-2014, Nonlinear and Dynamic Programming, University of Tabriz.
- 2008- now, Water Resources Planning and Management, University of Tabriz.
- 2013- now, Environmental Management and Sustainable Development, University of Tabriz.
- 2019, Environmental Planning and Management, Sharif University of Technology.
- 2021, Groundwater Engineering, Amirkabir University of Technology
- 2022, Water and Environment Policy, Iran University of Science and Technology.
- 2022, Water and Environment Economics and Policy, Sharif University of Technology.
- 

## § Short Courses, Talks and Workshops

- Multi Criteria Decision Making in Water and Environment Management, Mahab Ghodss company, November 2007.
- Reducing the Non Revenue Water, Rural Water and Wastewater Company of East Azerbaijan province, Feb. 2, 2010.
- Conflict Resolution for Water Resources Management, in 2<sup>nd</sup> Iranian National Conference on Applied Research in Water Resources, Zanjan, Iran, (18 May 2011).
- Effective Decision Making for Integrated Water Resources Management, for higher water managers in Power and Water University of Technology, 1 June 2011.



- Organizing the Symposium on Urmia Lake and Solutions for the Crisis Management, Environmental Sciences and Architecture Department, University of Tabriz, October 10, 2012.
- Coordinating the Workshop on the Impacts of Civil Engineering projects on the Environment of the Earth (with illustration on Home documentary), Faculty of Civil Eng. and Islamic Society of Students, University of Tabriz, October 17, 2012.
- Integrated Water Resources Management, Azerbaijan Water and Energy Complex, September 2013.
- Effective Governance for Integrated Water Resources Management, Iran Water Resources Management Company, June 15, 2014.
- Urmia Lake: How Water Diplomacy Could Help? Water Diplomacy Colloquium, Tufts University, Nov. 24, 2014. Some part is published in Urmia Lake: The Need for Water Diplomacy. (2015, January 28). [AquaPedia Case Study Database](#).
- Iran Groundwater Restoration Plan: critics from governance point, Water and Soil Engineering and Management Conference, University of Tehran, 27 Sept. 2016.
- Conflict Resolution for Shared Water Resources, Azerbaijan Water and Energy Complex, October 2016.
- Interbasin Water Transfer or Rainwater Harvesting, 9<sup>th</sup> Iran Rain Conservation Congress, University of Tabriz, 05 September 2020.

#### **§ Invited reviewer for the indexed Journals (In alphabetical order)**

##### **- Field of water resources and environmental management**

1. Amirkabir Journal of Science & Technology, 2012, 2013.
2. AQUA - Water Infrastructure, Ecosystems and Society, 2023
3. Arabian Journal of Geosciences, 2013
4. British Journal of Environment and Climate Change, 2012.
5. Civil Engineering Infrastructures Journal, 2013, 2018
6. Dynamics of Atmospheres and Oceans, 2013
7. Earth Science Informatics, 2014
8. Energy Policy, 2012.
9. Environmental Engineering and Management Journal, 2012.
10. Environmental Engineering Science, 2011, 2016.
11. Environmental Management (Springer), 2008
12. Environmental Modelling & Software, 2009.
13. Environmental Sciences Group, 2013.
14. Geographical Researches Quarterly Journal, 2017
15. Herald Journal of Education and General Studies, 2012.
16. IEEE Geoscience and Remote Sensing Letters, 2019.
17. International Journal of Hydrology Science and Technology, 2012, 2013.
18. Iran Ecohydrology Journal, 2020.
19. Iran Water Resources Research, (In Farsi) 2008, 2010 (2), 2011(3), 2012(2), 2013(2), 2014, 2016(5), 2017 (4), 2018(4), 2019, 2020(2).
20. Journal of Agricultural Engineering Research, (In Farsi), 2012.
21. Journal of Agricultural Science and Technology, 2012.

22. Journal of Civil Eng. (Ferdowsi Univ. of Mashad), 2010, 2014.
23. Journal of Civil and Environmental Engineering (University of Tabriz, in Farsi), 2008 (2), 2011(4), 2012(3), 2013(3), 2014, 2015, 2016, 2018, 2019, 2020, 2021(2).
24. Journal of Contemporary Water Research and Education, 2014, 2015.
25. Journal of Environmental Health Science and Engineering (2014)
26. Journal of Environmental Management, 2008 (2), 2009, 2010 (2), 2011, 2012(3), 2014(2), 2015, 2016, 2017, 2018, 2021.
27. Journal of Great Lakes Research, 2021
28. Journal of Iranian Watershed Management Society (University of Tehran, in Farsi), 2009, 2012.
29. Journal of Hydrology, 2011, 2017(2), 2019, 2020(2).
30. Journal of Water and Soil Conservation (in Farsi), 2013(2), 2014.
31. Journal of Water Resources Planning and Management, 2015, 2016.
32. Journal of Zhejiang University-Science A, 2013
33. Lakes and Reservoirs: Research and Management, 2016
34. Natural Hazards and Earth System Sciences, 2017
35. Resources, Conservation & Recycling, 2012, 2013.
36. Science of Water and Soil (University of Tabriz, in Farsi) 2007, 2009, 2010 (3), 2011(2), 2012(4), 2013(2), 2014(2), 2020.
37. Science of the Total Environment, 2018
38. Scientia Iranica, 2013, 2014
39. Stochastic Environmental Research & Risk Assessment, 2008 (2), 2013.
40. Sustainable Cities and Society, 2020.
41. Sustainability Science (Springer), 2010.
42. Theoretical and Applied Climatology, 2013
43. Urban Water 2018
44. Water, 2010
45. Water International, 2022
46. Water Alternatives, 2018
47. Water and Irrigation Management (University of Tehran, in Farsi), 2013, 2015.
48. Water and Wastewater (in Farsi), 2009(2), 2010 (2), 2011(3), 2012(2), 2013(3), 2014, 2017, 2020.
49. Water Management Journal, Proceedings of ICE, 2008.
50. Water Resources Management, 2005, 2007, 2008, 2009(3), 2011, 2012, 2013.
51. Water Resources Research, 2013
52. Water SA, 2007
53. Watershed Engineering and Management, 2018 (in Farsi)

**- Field of decision making**

54. Applied Mathematical Modeling, 2009 (2), 2020.
55. Applied Soft Computing, 2009
56. Engineering Applications of Artificial Intelligence, 2013, 2014, 2022.
57. Fuzzy Optimization and Decision Making, 2010, 2015, 2018.
58. IEEE Transactions on Fuzzy Systems, 2007 and 2008, 2016, 2018.
59. IEEE Transactions on Systems, Man and Cybernetics - Part B, 2008, 2011, 2012.

60. Information Fusion, 2006
61. Information Sciences, 2008 (3), and 2009 (2), 2010
62. Int. J. of Approximate Reasoning, 2007
63. Int. J. of Information Technology & Decision Making, 2010, 2012, 2014.
64. Iranian Journal of Fuzzy Systems, 2010, 2017.
65. Iranian Journal of Operational Research, 2009
66. Journal of Ambient Intelligence and Humanized Computing, 2020
67. Journal of Geography and Regional Planning, 2011
68. Journal of Mechanical Engineering (University of Tabriz, in Farsi), 2010
69. Knowledge-Based Systems, 2012, 2015.
70. Organization Management Journal, 2017
71. Sharif Journal of Science and Technology (in Farsi), 2009
72. Soft Computing (Springer), 2010, 2012, 2013.
73. Sustainability, 2013.

#### **§ Referee for conference proceedings**

1. 36<sup>th</sup> WDSI (Western Decision Science Institute), Denver, USA (April 3-7, 2007).
2. 3<sup>rd</sup> Iran Water Resources Management Conference, 14-16 October 2008, University of Tabriz.
3. 19<sup>th</sup> International Conference on MCDM, 2008, Auckland New Zealand.
4. 8<sup>th</sup> International Congress on Civil Eng., Shiraz University, Iran (May 11-13, 2008).
5. World Water Congress (IWA, 19-24 September 2010, Montreal, Canada) (2).
6. 5<sup>th</sup> National Congress on Civil Engineering, Mashad, Iran 2010.
7. 4<sup>th</sup> Iran Water Resources Management Conference, 2-3 May 2011, Amirkabir University of Technology (Tehran Polytechnic).
8. The 2<sup>nd</sup> Iranian National Conference on Applied Research in Water Resources, Zanjan, Iran, (18-19 May 2011).
9. The First International and Third National Conference On Dams And Hydropower in Iran, 8-9 February 2011, Tehran.
10. 9<sup>th</sup> International Conference on Civil Engineering, 8-10 May 2012, Isfahan University of Technology, Iran.
11. 11<sup>th</sup> Iran Hydraulic Conference. 6-8 Nov. 2012, Urmia University, Iran.
12. International Conference of Urmia Lake, 8-10 Dec. 2012. Urmia city, Iran.
13. ICWRER. 2013, edited volume of "Conflict Resolution in Water Resources and Environmental Management", Springer.
14. 7<sup>th</sup> National Congress on Civil Engineering, Zahedan, Iran, 6-7 May 2013.
15. 5<sup>th</sup> Iran Water Resources Management Conference, 18-19 Feb. 2014, Power and Water University of Technology (Tehran).
16. 2014 Norwich Conference on Earth System Governance: Access and Allocation in the Anthropocene, University of East Anglia, 1-3 July 2014.
17. 10<sup>th</sup> International Congress of Civil Engineering, May 5-7, 2015. University of Tabriz, Iran.
18. 2015 Canberra Conference on Earth System Governance, Dec. 12-14, 2015, Canberra, Australia.

19. 4<sup>th</sup> International Reliability Engineering Conference, Sahand University of Technology, 26-28 April 2016.

#### **§ Referee for Books or research projects**

1. Research Deputy, Water Resources Management Company of Iran (from 2006 up to now).
2. East Azerbaijan Regional Water Company, (from 2009 up to now).
3. Book of "Recent Developments in OWA operator theory and applications" to be published by Springer, 2010.
4. National Elites Organization (East Azerbaijan Province, referee on patents, from 2010 up to now).
5. Research and Technology Office, University of Tabriz, 2011.
6. Book of "Metaheuristics for Water, Geotechniques, and Transport Engineering", 2012.
7. Review on "Flood Forecasting, Warning and Remediation code" for East Azerbaijan Province, 2012.
8. West Azerbaijan Regional Water Company, (from 2013 up to now).
9. Ardabil Regional Water Company, (2015).
10. Earth Science, Geography, and Environment series of Springer, 2015.
11. Proposals submitted to National Plan for Integrated Watershed Management, 2015.
12. Iran National Science Foundation, 2018.
13. MSRT (Iran)-BMBF (Germany) Joint Proposal, 2019.

#### **§ Referee for thesis**

1. PhD proposal and final thesis of Ms. Mahsa Tehrani, Department of Water Resources Engineering, Faculty of Agriculture, Tarbiat Modares University, 2010, 2012.
2. PhD dissertation, Mr. Keyvan Khalili, Faculty of Agriculture, University of Tabriz, 2010.
3. MSc thesis of Mr. Taher Mahmoudpour Nichalani, Department of Water Resources Engineering, Faculty of Agriculture, Tarbiat Modares University, 2012.
4. MSc thesis of Ms. Maryam Mohammadpour, Department of Water Resources Engineering, Faculty of Agriculture, Tarbiat Modares University, 2012.
5. MSc thesis of Ms. Maryam Khosravi Sorkhkalie, Department of Water Engineering, Faculty of Civil Eng., University of Tabriz, 2013.
6. MSc thesis of Ms. Nasrin Nezamdost Sani, Department of Water Engineering, Faculty of Civil Eng., University of Tabriz, 2013.
7. MSc thesis of Ms. Samane Golmaghani Asl, Department of Water Engineering, Faculty of Civil Eng., University of Tabriz, 2014.
8. PhD proposal of Mr. AmirHossein Aghakhani Afshar, Department of Water Engineering, Faculty of Civil Eng., University of Tabriz, 2014.
9. PhD proposal of Mr. Mohammad Hossein Rabie, Department of Water Engineering, Faculty of Civil Eng., University of Tabriz, 2014.
10. MSc thesis of Mr. Reza Dashti, Department of Water Engineering, Faculty of Civil Eng., University of Tabriz, 2016.
11. MSc thesis of Mr. Vahid Sharifian, Department of Water Engineering, Faculty of Civil Eng., University of Tabriz, 2016.
12. PhD proposal of Mr. Ali Mirfendereski, Department of Industrial Engineering, Sharif University of Technology, 2016.

13. PhD proposal of Mr. Vahid Farshi, Faculty of Civil Engineering, University of Tabriz, 2016.
14. MSc thesis of Mr. Mahdi Aghajani, Department of Water Engineering, Faculty of Civil Eng., University of Tabriz, 2017.
15. PhD proposal of Mr. Mohammad Amin Zolfagharipoor, Faculty of Civil Engineering, Isfahan University of Technology, 2017.
16. PhD proposal of Mr. Hamid Fazayeli, Faculty of Civil Engineering, University of Tabriz, 2017.
17. MSc thesis of Mr. Mahdi Zarei, Faculty of Civil Eng., Iran University of Science and Technology, 2018.
18. MSc thesis of Mr. Mohammad Amin Tavakoli, Faculty of Civil Eng., Iran University of Science and Technology, 2018.
19. PhD proposal of Ms. Fahimeh Ahmadzadeh Deljavan, Faculty of Economics and Management, University of Tabriz, 2018.
20. PhD proposal of Ms. Zohreh Sadat Ahmadi, Faculty of Civil Engineering, Isfahan University of Technology, 2018.
21. PhD Thesis of Mrs. Aida Hoseini Baghanam, Faculty of Civil Engineering, University of Tabriz, 2018.
22. PhD proposal of Mr. Mohammad Neko Amal, Faculty of Agriculture, University of Tehran, 2019.
23. PhD proposal of Mr. Mostafa Rezaie Zaman, Faculty of Agriculture, University of Tehran, 2019.
24. PhD thesis of Ms. Seyedeh Shima PorAlihosein, Department of Agriculture, Tarbiat Modares University, 2019.
25. MSc thesis of Ms. Nafiseh Bahrami, Faculty of Civil Eng., Iran University of Science and Technology, 2019.
26. PhD thesis of Ms. Mehri Abdi Dehkordi, Department of Irrigation & Reclamation Engineering, University of Tehran, 2019.
27. PhD proposal of Mr. Ali Mohammadi, Faculty of Agriculture, University of Tehran, 2019.
28. MSc thesis of Mr. Saeid Bagherzadeh, Faculty of Civil Eng., Iran University of Science and Technology, 2019.
29. PhD thesis of Mr. Hamid Fazaeli, Faculty of Civil Eng., University of Tabriz, 2020.
30. MSc Thesis of Mr. Arshia Jedari Seifi, Faculty of Civil Engineering, University of Tabriz, 2020.
31. PhD proposal of Ms. Elmira Valipour, Faculty of Agriculture, Tarbiat Modares University, 2020.
32. PhD thesis of Ms. Leila Naghipour, Faculty of Civil Eng., University of Tabriz, 2020.
33. MSc thesis of Mr. Behavar Deilami, Faculty of Agriculture, Tarbiat Modares University, 2020.
34. PhD proposal of Ms. Seyedeh Simin MirHashemi Dehkordi, Faculty of Agriculture, Tarbiat Modares University, 2020.
35. PhD proposal of Ms. Mitra Tanhapour, Faculty of Agriculture, University of Tehran, 2020.
36. PhD proposal of Ms. Fahmideh Ghorbani, Faculty of Management and Economics, University of Tabriz, 2020.
37. MSc thesis of Mr. Mohammad Reza Gholipour, Faculty of Art, Tarbiat Modares University, 2021.

38. MSc thesis of Mr. Alireza Vafaei Fard, Faculty of Agriculture, Tarbiat Modares University, 2021.
39. MSc thesis of Mr. Mohammad Hosein Ramazani, Faculty of Civil Eng., University of Tehran, 2021.
40. MSc thesis of Mr. Hadi Meidani, Faculty of Civil Eng., University of Tehran, 2021.
41. MSc thesis of Mr. Ali Khodagholi, Faculty of Civil Eng., Iran Univ. of Science and Tech., 2021.
42. MSc thesis of Mr. Korosh Asadi Fard, Faculty of Civil Eng., Sharif University of Tech., 2021.
43. PhD thesis of Mr. Moahmmad Amin Zolfagharipour, Faculty of Civil Eng., Isfahan University of Tech., 2021.
44. MSc thesis of Ms. Elham Khalseh, Faculty of Systems and Industrial Eng., Tarbiat Modares University, 2021.
45. PhD proposal of Ms. Nardin Jabarian, Faculty of Civil Eng., University of Tabriz, 2021.
46. PhD proposal of Mr. Hosein Javad Zadeh, Faculty of Civil Eng., Sharif University of Tech., 2021.
47. MSc thesis of Mr. Amirreza Meidai, Faculty of Civil Eng., Sharif University of Tech., 2022.
48. MSc thesis of Mr. Seyed Reza Radseresht Hamadani, Faculty of Civil Eng., Sharif University of Tech., 2022.
49. MSc thesis of Ms. Sahar Ghoreishi, Faculty of Civil Eng., Iran Univ. of Science and Tech., 2022.
50. PhD proposal of Mr. Edit Eishavi, Faculty of Natural Resources, Urmia University, 2022.
51. PhD proposal of Ms. Mahta Nazari, Faculty of Civil Eng., University of Tehran, 2022.
52. PhD proposal of Ms. Zahra Razaghzadeh, Faculty of Civil Eng., University of Tehran, 2022.
53. PhD proposal of Mr. Ali Ehsanitarbar, Faculty of Civil Eng., University of Tabriz, 2022.
54. MSc thesis of Mr. Ebrahim Bahramipour, Faculty of Civil Eng., Iran Univ. of Science and Tech., 2022.
55. PhD proposal of Mr. AmirHosein Aghili, Faculty of Civil Eng., Isfahan University of Tech, 2023.
56. PhD thesis of Ms. Samira Soltani, Faculty of Civil Eng., Sharif University of Tech., 2023.
57. PhD proposal of Mrs. Fatemeh Shaker Sore, Faculty of Agriculture., University of Tarbiat Modares, 2023.
58. PhD proposal of Mr. Mohammad Nabi Jalali, Faculty of Agriculture., University of Tehran, 2023.
59. MSc thesis of Ms. Sanaz Mahmoudi, Faculty of Civil Eng., Sharif Univ. of Tech., 2023.

#### **§ Session chair and invited panelist**

1. Workshop of Project Selection for the National Plan for Integrated Watershed Management, Javanshir Natural Resources Training Center, Karaj, 22 May 2014.
2. Urmia Lake Rescue Congress, Urmia University, 16-19 Feb. 2014.
3. First Seminar on Social Studies for Dam Construction Projects, Iran ICOLD, Iran Ministry of Energy (Tehran), 29 May 2013.
4. 3<sup>rd</sup> Workshop of National Plan for Integrated Watershed Management, Guilan University, 24-25 April 2013.
5. 5<sup>th</sup> International Perspective on Water Resources and the Environment, 5-7 January 2012, Marrakech, Morocco, (session in "Flood and Drought Management").

6. 2<sup>nd</sup> Iranian National Conference on Applied Research in Water Resources 18-19 May 2011, Zanjan, Iran, (session in "New Techniques for Water Resources Management").
7. 4<sup>th</sup> Iran Water Resources Management Conference, 2-3 May 2011, Amirkabir University of Technology. (sessions in "Climate Change, Water Management and Workshop on Education and Research")
8. 4<sup>th</sup> ASCE-EWRI International Perspective on Water Resources & the Environment, 4–6 January 2011, National University of Singapore, Singapore. (session in "Sustainable Urban and Rural Water Development").
9. 3<sup>rd</sup> Iran Water Resources Management Conference, 14-16 October 2008, University of Tabriz.
10. 36<sup>th</sup> WDSI, 2007 Denver, USA (3-7 April) # 146. (session in "Quantitative Methods for Management Science").

#### **§ Interview with the media**

1. "Urmia Lake Panel", Karaayi Monthly, 13 Aug. 2017.
2. "IWRM in Iran", Strategic Foresight Group, Jan. 14, 2017.
3. "Trade, an alternative for agriculture to restore the Urmia Lake", Iran Agriculture Agency News, 8 May 2016.
4. "Effective water management to improve Tabriz green areas", Sahand channel, IRIB, 27 April 2014.
5. "Finding national decision to improve the Urmia Lake condition", Mehr-e-Ab magazine, December 2012, pages 43-44.
6. "Report on Urmia Lake Forum", Sahand channel, IRIB, 10 October 2012.
7. "The Causeway effect on Urmia Lake", NasrNews, 24 July 2012 (reprinted in Asre-e-Azadi newspaper, 26 July 2012).
8. "Tabriz urban water challenges", Khorasan newspaper, 2012.
9. "Urmia Lake roundtable", Sahand channel, IRIB, 10 January 2012.
10. "Report on Tabriz Urban Water Research", University of Tabriz, Bulletin, Dec. 2011.
11. "Urmia Lake", IRNA, 1 March 2010.

#### **§ Software application experience**

1. GAMS (General Algebraic Modeling System)
2. WinQSB (Optimization)
3. EC (Decision Making by AHP Methodology)
4. VENSIM (VENTana SIMulation software for system dynamics)
5. SMADA (Hydrological Modeling and Calculations)
6. ITSM (for Stochastic Hydrology)
7. GANLC (for Optimization based on Genetic Algorithms)
8. SAPHIRE (for Reliability of Systems)
9. Decision Lab
10. HEC\_HMS (Hydrological Modeling System)
11. FDM (Fuzzy Decision Making)
12. GFDM (Group Fuzzy Decision Making)
13. WEAP (Water Evaluation and Planning System)
14. LARS-WG (Long Ashton Research Station Weather Generator)

- 15. Office
- 16. MATLAB
- 17. RAINBOW

### **§ Language**

Fluent in Farsi and Turkish (Azeri), very good in English; Arabic (intermediate)

### **§ Travel experience**

Lived in different states of US for about 21 months, visited most of the Western Europe countries including UK, as well as other countries such as Canada, New Zealand, China, Singapore, Malaysia, Turkey, Brazil, and Morocco, Oman, Indonesia, Tajikistan, Georgia among others.

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