# **Masoud Taheriyoun**

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#### **EDUCATION**

- 2005-. 2010, **Ph.D.**, in Environmental Engineering, University of Tehran, Faculty of Environment, Tehran, Iran,
- 1998- 2001, **Master of Science**, in Environmental Engineering, University of Tehran, Faculty of Environment, Tehran, Iran,
- .1993- 1997, **Bachelor of Science**, Civil Engineering, University of Tehran, Faculty of Engineering, Tehran, Iran

## **INTEREST AREAS**

- Water Quality management
- Wastewater treatment and reuse
- Life cycle assessment and Waterfoot print analysis

## ACADEMIC EXPERIENCE

- 2023- present: Associate Professor, Department of Civil engineering, Isfahan University of Technology (IUT), Isfahan, Iran
- 2013- 2023: Assistant Professor, Department of Civil engineering, IUT, Isfahan, Iran, BSc courses: Environmental engineering, water and wastewater networks, Wastewater treatment plant design, MSc. Course: Water reuse and reclamation, Wastewater treatment, Industrial wastewater treatment, Basics of advection, diffusion and pollution modeling, Solid waste management
- 2011-2013: Assistant professor, Department of Civil engineering, Kharazmi University, Tehran, Iran, Courses: Wastewater Microbiology, Water& wastewater treatment plant design, Fluid Mechanics, Wastewater treatment
- 2002-2011: Lecturer in Kharazmi University and Azad University of Najafabad, Iran, Teaching Courses: Wastewater Microbiology, Wastewater treatment, Water Chemistry & Microbiology, Water& wastewater treatment plant design

### RESEARCH PROJECTS

- 2023, Development of an advanced treatment method for municipal wastewater treatment for reuse in sand-washing and concrete production, Granted by Isfahan city municipality (~Grant: 10,000€)
- 2021, Applicability, rehabilitation and optimization of pond systems for the treatment and reuse of wastewater in Iran, Joint with Tehran University of Medical science and University of Stuttgart, Granted by Iranian National Institute for Medical Research Development (NIMAD) & German Federal Ministry of Education and Research (BMBF) (Grant: 20,000€)

- 2021, Energy Benchmarking in industrial wastewater treatment plant in Isfahan province, Granted by Isfahan Industrial complex company (~Grant: 15,000€)
- 2021, Combined package of high rate anaerobic pilot with trickling filter, Granted by Isfahan Industrial complex company (~Grant: 15,000€)
- 2021, Comprehensive wastewater management in Isfahan university of technology, Granted by IUT office of general affairs (~ Grant : 5000€)
- 2019, Assessment of the effect of the increase of influent organic load on the waste sludge volume discharged from SBR treatment system in Yazd city, Granted by Yazd water and wastewater company (∼7000€)
- 2018, Evaluation of municipal sludge treatment by Vermifilter System in a pilot scale, Granted by Chaharmahal Bakhtiari water and wastewater company (~6000€)
- 2015-2016, Collaboration in "Updating the Zayandeh Rood pollution reduction comprehensive plan, Isfahan Environment Department, executive Dr. Mohammad Karamoz, University of Tehran.
- 2013-2015, Improving the wastewater effluent quality of the Arak stabilization pond treatment plant with plant species and determining the best option, Water and wastewater Company of Markazi Province.
- 2008, University of Tehran, Faculty of Environment, Design of Haraz River Pollution Monitoring Station, Haraz River Pollution Control and Reduction Plan, Client: Iran Department of Environment

## **SELECTED ARTICLES**

- SeyedSharifi, M., *Taheriyoun*, M., & Qandari, H. (2023). Analyzing the effects of different patterns of diffuser layouts on air distribution and mixing quality in an aeration tank using CFD. *Process Safety and Environmental Protection*.
- Fallahi, A., & *Taheriyoun*, M. (2023). Developing a sustainable water and wastewater management plan based on water footprint in a part of a steel industry: a case of iron pellet production factory in southeastern Iran. *Environment, Development and Sustainability*, 1-20.
- *Taheriyoun, M.*, Fallahi, A., Nazari-Sharabian, M., & Fallahi, S. (2023). Optimization of best management practices to control runoff water quality in an urban watershed using a novel framework of embedding-response surface model. Journal of Hydro-environment Research, 46, 19-30.
- Pashmchi, P., *Taheriyoun, M.*, & Asghari, K (2022). Integrated river water quality and quantity management based on undesirability and cost-effectiveness. River Research and Applications.
- Nazari-Sharabian, M., & *Taheriyoun*, M. (2022). Climate change impact on water quality in the integrated Mahabad Dam watershed-reservoir system. *Journal of Hydro-environment Research*, 40, 28-37.
- Bakhtiar, M., Aminzadeh, M., *Taheriyoun*, M., Or, D., & Mashayekh, E. (2022). Effects of floating covers used for evaporation suppression on reservoir physical, chemical, and biological water quality parameters. *Ecohydrology*, e2470.
- Nouri, A., Asadi, P., & Taheriyoun, M. (2021). Life-Cycle Cost Analysis of Seismic Designed RC Frames Including Environmental and Social Costs. *Journal of Earthquake Engineering*, 1-20
- Mirzaee, M., Safavi, H. R., *Taheriyoun*, M., & Rezaei, F. (2021). Multi-objective optimization for optimal extraction of groundwater from a nitrate-contaminated aquifer considering

- economic-environmental issues: A case study. *Journal of Contaminant Hydrology*, 241, 103806.
- Analouei, R., *Taheriyoun*, M., & Safavi, H. R. (2020). Risk assessment of an industrial wastewater treatment and reclamation plant using the bow-tie method. *Environmental monitoring and assessment*, 192(1), 1-16.
- *Taheriyoun*, M., Memaripour, A., & Nazari-Sharabian, M. (2020). Using recycled chemical sludge as a coagulant aid in chemical wastewater treatment in Mobarakeh Steel Complex. *Journal of Material Cycles and Waste Management*, 1-12.
- Kaji, A., *Taheriyoun*, M., Taebi, A., & Nazari-Sharabian, M. (2020). Comparison and optimization of the performance of natural-based non-conventional coagulants in a water treatment plant. *Journal of Water Supply: Research and Technology-Aqua*, 69(1), 28-38.
- Nazari-Sharabian, M., *Taheriyoun*, M., Ahmad, S., Karakouzian, M., & Ahmadi, A. (2019). Water quality modeling of Mahabad Dam watershed—reservoir system under climate change conditions, using SWAT and system dynamics. Water, 11(2), 394.
- *Taheriyoun*, M. and Rad, M., 2017. Simulation of organics and nitrogen removal from wastewater in constructed wetland, European Water 58: 135-141
- Fathianpour, A., *Taheriyoun*, M., & Soleimani, M. (2018). Lead and zinc stabilization of soil using sewage sludge biochar: optimization through response surface methodology. *CLEAN–Soil, Air, Water*, 46(5), 1700429.
- Karamouz M., *Taheriyoun* M., Seyedabadi M., Nazif S., 2015, Uncertainty Based Analysis of the Impact of Watershed Phosphorus Load on Reservoir Phosphorus concentration, Journal of Hydrology, 521, 533–542
- *Taheriyoun* M., Moradinezhad S., 2014, Reliability Analysis of a Wastewater Treatment Plant Using Fault Tree Analysis and Monte Carlo Simulation", Environmental Monitoring and Assessment, 187(4186), 1-13,
- *Taheriyoun*, M., Karamouz, M., & Baghvand, A. (2011). Development of a phosphorous management model for a reservoir using system dynamic simulation approach. Iran-Water Resources Research, 7(3), 13-26.
- Karamouz, M., *Taheriyoun*, M., Baghvand, A., Tavakolifar, H., & Emami, F. (2010). Optimization of watershed control strategies for reservoir eutrophication management. Journal of Irrigation and Drainage Engineering, 136(12), 847-861.
- *Taheriyoun*, M., Karamouz, M., & Baghvand, A. (2010). Development of an entropy-based fuzzy eutrophication index for reservoir water quality evaluation. Journal of Environmental Health Science & Engineering, 7(1), 1-14.

## MANUSCRIPT REVIEWER

- 2023, AQUA Water Infrastructure, Ecosystems and Society, ISSN: 2709-8036 (1)
- 2023, Journal of Environmental Management, ISSN 1095-8630 (IF:8.7) (1 paper)
- 2023, Environmental Science and Ecotechnology, ISSN 2666-4984 (IF:12.6) (1 paper)
- 2022, Urban water journal, ISSN 17449006 (IF:2.67) (2 paper)
- 2022, Environmental Science and Pollution Research, ISSN 16147499(IF:5.19) (3 paper)
- 2020, Lakes and Reservoirs: Science, Policy and Management for Sustainable Use ISSN:1440-1770 (1 paper)
- 2019-2020, Biomass conversion and biorefinery, ISSN 21906823(IF:4.05) (1 paper)

- 2017, Marine Pollution Bulletin, ISSN: 1879-3363 (1 paper)
- 2016, Journal of Water Supply: Research and Technology AQUA, ISSN 16053974(1)
- 2016-2021, Journal of Irrigation & Drainage Engineering, ASCE, ISSN 19434774 (IF:1.98) (2)
- 2017-2022, Environmental Monitoring and Assessment, ISSN 15732959 (IF3.30) (3 paper )
- 2010-2022, Journal of Water and Wastewater, ISSN 23830905 (in Persian) (40 paper)
- 2010-2022, Journal of Iran Water resource research, ISSN 24767360 (in Persian) (20 paper)
- 2015-2023, Journal of Water and Wastewater Science and Technology (JWWSE) ISSN 2588395X (in Persian) (10 paper)

## ACADEMIC SERVICE

- 2022- present: Coordinator of international affairs, Department of civil engineering
- 2022, Member of scientific committee in 13th National Congress of Civil Engineering on May 20-22, 2023, Held in the Department of Civil Engineering, Isfahan univereisty of technology
- 2015-2022, Head of the environmental laboratory, Department of civil engineering, Accredited by Department of Environment
- 2021, 2022, Member of the water and wastewater committee of the green management steering group of the Ministry of Science, Research and Technology
- 2020- 2022, Member of the environment branch of HSE committee at IUT.
- 2017-2018, Secretary of the scientific committee of entrepreneurship event in wastewater works, IUT, Water and wastewater research center

### HELD WORKSHOPS

- Dec, 2023, Reverse osmosis system design with WAVE software, Workshop held in Qatar University, Doha, in the context of IWRM III joint project with TU Berlin university.
- Feb, 2023, Membrane BioReactor (MBR), a Promising Approach for Water Reuse, Current state, challenges and opportunities of full-scale applications, A lecture at university of TU Berlin, Germany
- 2022, A review of recent methods of effluent improvement of wastewater stabilization ponds, Held by IUT in cooperation with Technical University of Stuttgart (Germany)
- 2021, Upgrading sewage treatment plants with emerging technologies
- 2021, Introduction to emerging processes in wastewater treatment
- 2021, Design of reverse osmosis system with ROSA software
- 2020, Environmental impact assessment of water and wastewater projects
- 2020, Architectural and hydraulic design of sewage treatment plants
- 2020, Introduction to evaluating Environmental impact assessment of construction projects
- 2019, System dynamic modeling application in environmental systems analysis

- 2013-2016, Project manager of feasibility studies of water treatment plants in Khalkhal, Sardasht and Astara cities, Colabolration with Water & wastewater Design & Research Consultant Engineers Company
- 2013, Feasibility studies of sewer system and wastewater treatment plant (WWTP) of Aran and Bidgol city, Clinet:Water and Wastewater Company of Kashan city.
- 2012-2018, Moshanir Consultant Engineers Company, Water quality modeling studies of Qeshlaq River and Javeh Dam reservoir and presenting solutions for reservoir pollution reduction.
- 2011, Tous Ab Consultant Engineers Company, Editorial review of code 129 Guidline for review and approval of municipal wastewater treatment plans, Chapter of sludge treatment and disposal, Clinet: Ministry of Power
- 2008, Yekom Consultant Engineers Company, Project manager of Mazandaran province river water quality studies, Clinet: Mazandaran water regional organization
- 2006-2012: Project manager and Member of the Technical Committee for Environmental Studies of Mahab Qods Consulting Engineers, Projects: Sazbon Dam Environmental impact studies, Thermal Stratification and eutrophication simulation, Environmental impact assessment of hydroelectric power plant and Irrigation and Drainage Network of Kam, Afghanestan, Marazad power plant project, Khoda Afrin (Aras river), Karkheh river pollution reduction plan, Mishkinshahr geothermal power plant monitoring.
- 2006-2010: Collaboration in research project under supervision of Dr. Karamoz, University
  of Tehran, Risk management of water and wastewater systems, The Ministry of Energy,
  Aharchai drought management project in East Azerbaijan, Simulation of thermal
  stratification of the Sattar Khan Dam river, Environmental flow calculations of Ahrchai,
  Economic water value determination in Kerman province, Supervising the project of studies
  on pollution reduction of Zarinehroud river, done by Lar consultant engineers.
- 2001-2006: Project manager and desinger of water and wastewater treatment plant studies, Water & wastewater Design & Research Consultant Engineers Company, Projects: WWTP projects in Mehran Abad, Ardestan, Golpaygan, Khorram Abad, Zahedan, Ramhormoz and Saveh, Hafeshjan Yazd, Zahedan, Process and Hydralic designer of project of Najaf Abad, Chabahar, Yasouj, Dareh Shahr WWTP
- 1999-2001: Project manager and desinger of water and wastewater treatment plant studies, Tehran Sahab Consultant Engineers Company, Wastewater treatment plant in the cities of Dehdasht, Dogonbadan and Abadeh.

#### **HONORS**

- 2009, First rank among Ph.D. graduates
- 2000, First rank among MSc graduates
- 1993, Rank 38 in the nationwide university entrance exam 1993-1994 in the Mathematics science branch