

Curriculum Vitae**Maryam Zare, PhD**Email: maryam.zare@sharif.edu

Department of Civil Engineering
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Tel: 

EDUCATIONAL BACKGROUND

- **Postdoctoral Research Associate** March 2020- present
Sharif University of Technology, Tehran, Iran
- **PhD in Civil Engineering (Environmental Engineering)** Sep 2014-Oct 2019
Sharif University of Technology, Tehran, Iran GDP: 18.07/20
Ph.D. Thesis: “Assessment of sources and components of fine PM and effect of different parameters on them in Tehran”
Supervisor: Dr. Arhami
- **M.Sc. in Civil Engineering** Sep 2010-Sep 2012
Sharif University of Technology, Tehran, Iran GPA: 18.28/20
M.Sc. Thesis: “Spectral analysis of air quality data in Tehran”
Supervisor: Dr. Arhami
Accepted without National M.S. University Exam (Concurs) as an exceptional talent
- **B.Sc. in Civil Engineering** Sep 2006-Sep 2010
Sharif University of Technology, Tehran, Iran GPA: 16.22/20
(Achieved M.Sc. Acceptance without National Entrance Examination (Exceptional talent))

HONORS AND AWARDS

- ✓ **Selected** for Shahid Ahmadi Roshan grant for research of young scientists awarded by Iran's National Elites Foundation (2019).
- ✓ **Selected** for Top Student Festival at Sharif university of technology (2017).
- ✓ **Join** to National Elites Foundation (Iran's National Elites Foundation member) (2015-current).
- ✓ **Achieved** Academic award from National Elites Foundation in Ph.D. duration in Sharif University of Technology (2015-2017-2019).
- ✓ **Selected** for Ph.D. research/teaching assistant grant awarded by Iran's National Elites Foundation for three years (2015, 2017, 2019).
- ✓ **Selected** as the best papers, 2nd Air and Noise Pollution Conference, Iran, (2013).
- ✓ **Ranked 1st** based on GPA among all water & Environmental Ph.D. students, Sharif University of Technology (2018).

- ✓ **Ranked 1st** among all Environmental Engineering students at the end of M.Sc. period, Sharif University of Technology (2012).
- ✓ **Credited** M.SC. program entrance exam waiver as a Talented Student by Dean of Sharif University of Technology (2010).
- ✓ **Achieved** Governmental Scholarship for academic life in Sharif University of Technology (2006-2019).
- ✓ **Achieved** Science Nordic certificate for scientist.

RESEARCH AREA

- Chemical analysis and air pollution sampling techniques to understand the chemical composition of source emissions and atmospheric pollutant concentrations.
- Numerical modeling of air pollution monitoring (Spectral analysis of pollutant concentrations, Numerical analysis of trends, Artificial neural networks and etc.).
- Effect of air pollution on human health, climate change and sensitive ecosystems.
- Applied Numerical Methods in Air Pollution
- Health Effects of Air Pollutants

RESEARCH EXPERIENCE

Sharif University of Technology/ WISC/ PSI/AQCC/DoE

- **Postdoctoral studies** on tunnel projects and extracting the for gasoline vehicle's profile and its chemical species, Cooperation with Paul Scherrer Institute's (PSI) laboratory in Switzerland and the Helmholtz Zentrum München laboratory in Germany (2020).
- **Holding various workshops** on air pollution and the environment at DoE (2020).
- **Research** on assessing the social, cultural and economic effects of environmental phenomena in the country supported by Iran's National Elites Foundation (2019-2020).
- **Head of some projects** on air pollution and the interaction between air pollutants and meteorological parameters (2018-2020).
- **Reviewer** for some papers studied the air pollution and climate change.
- **Research** on tunnel measurements to characterize PM_{2.5} emissions from light-duty vehicles in Tehran in Sharif Digital Repository (SDR) (2019-2020).
- **Holding some training courses** on air pollution modeling for Tehran Air Quality Control Company experts (2014).
- **Writing some research report** on Source Apportionment of PM_{2.5} in Tehran for Air Quality Control Company (2016).
- **Source Apportionment of PM_{2.5} in Tehran**, Cooperation with WSIC laboratory in University of Wisconsin-Madison, USA and Tehran Air Quality Control Company, 2014-2018
- **Determining Aerosol Sources Due to Lake Urmia Drying**, Lake Urmia Restoration Committee, 2015-2017.
- **Ph.D. studies (2014-2019)** "Source apportionment of PM in Tehran by Principal Components Analysis (PCA) and CMB (Chemical mass balance)".

- **Source apportionment of fine particles in Tehran** “Prepared three technical report and one executive Summary about chemical components and source identification of PM_{2.5} for Air Quality Control Company (AQCC).”
- **Chemical analysis of PM in Urmia lake (2014)** “Determined the PM components and its sources in some station near the Urmia lake”
- **Dust Phenomenon studies (2014)** “Prepared the Training manual for general “Dust Phenomenon” information and appropriate and timely action to facing this problem for people lived around the Urmia lake”
- **M.Sc. Thesis (2012)** “Studied air quality data signal in frequency domain by Lomb-Scargle periodogram and separate different time scales by KZ filter”
- **Spectral Analysis of Air Pollution Data in Tehran (2012-2013)**

TEACHING EXPERIENCE

- **Teaching at Sharif University of Technology for Environmental Engineering (Fall 2020)**
- **Teaching at Sharif University of Technology for Transport process in Environmental Engineering (Fall 2020) (Postgraduate)**
- **Teaching at Sharif University of Technology for air pollution management and strategy (Spring 2020) (Postgraduate)**
- **Teaching at Azzahra University for Hydrology Engineering (Spring 2020)**
- **Teaching at Azzahra University for Hydraulic Engineering (Spring 2020-Fall 2020)**
- **Teaching at Azzahra University for Fluid Mechanics (Spring 2020)**
- **Teaching at Azzahra University for Groundwater Contamination (Spring 2020)**
- **Teaching at Azzahra University for Environmental Engineering (Fall 2018-2019-2020)**
- **Teaching at Azzahra University for Water & Wastewater Engineering (Fall 2019)**
- **Teaching at Azzahra University for Technical Language for Civil Engineering (Fall 2018-Spring 2020)**
- **Teaching at Azzahra University for Industrial Drawing (Fall 2018)**
- **Teaching at University of science and culture for Engineering Mechanics Static (Spring 2017, 2018).**
- **Teaching assistant at Sharif University of Technology for Air Pollution and its Control Method (Spring 2015, 2016).**
- **Teaching assistant at Sharif University of Technology for Principles of Environmental Processes (Fall 2014, 2015, 2016).**
- **Teaching assistant at Sharif University of Technology for Hydraulic Lab (Fall-Spring 2015, 2016).**
- **Instructor at Rahe-Zeynab of Higher Education, teaching Differential Equations (Spring-Summer 2012).**

BOOK PUBLICATIONS

- Emamjomee, M., Kamali, M., Arhami, M., **Zare Shahne**, M., Namdari, D., Bigdeli, M., Haghghat, N., Tajrishi, M., 2020. The effect of dust on the environment of the facilitators' training guide (focusing on the Urmia Lake catchment)

JOURNAL PUBLICATIONS

1. Arhami, M., **Zare Shahne**, M., Hosseini, V., 2018. Seasonal trends in the composition and sources of PM_{2.5} and carbonaceous aerosol in Tehran, Iran. *Environmental Pollution* 239, 69-81.

2. Arhami, M., Hosseini, V., **Zare Shahne**, M., Bigdeli, M., Shauer, S.S., Lai, A., 2016. Seasonal trends, chemical speciation and source apportionment of fine PM in Tehran. *Atmospheric environment* 153, 70-82.
3. Kamali, N., **Zare Shahne**, M., Arhami, M., 2015. Implementing spectral decomposition of time series data in artificial neural networks to predict air pollutant concentrations. *Environmental Engineering Science* 32, 379-388.
4. **Zare Shahne**, M., Arhami, M., 2016. Spectral decomposition of carbon-monoxide and meteorological parameters in Tehran, Iran. *Journal of Sharif*. 32.2., 1.1., 35-41.
5. **Zare Shahne**, M., Arhami, M., 2020. Assessment of Traffic-Related Particulate Matter components in a Road Tunnel in Tehran, Iran. *Environmental Pollution (under prepration)*

CONFERENCES PAPER

1. **Zare Shahne**, M., Arhami, M., Shauer, S.S., Lai, A., 2020. Source apportionment of fine particulate matter by combined receptor models in Tehran, Iran, international conference on civil engineering, architecture, development & reconstruction of urban infrastructure in Iran, Tehran.
2. Arhami, M., Hosseini, V., **Zare Shahne**, M., Bigdeli, M., Shauer, S.S., Lai, A., 2016. Carbonaceous, Organic and Toxic Metals Components of Particles and Their Seasonal Trends in Tehran, Iran, 21. ETH Conference on Combustion Generated Nanoparticles.
3. **Zare Shahne**, M., Askari, M., 2012. Study of solid waste management in dormitories of Iran (Case study: Girls dormitory in Sharif university of technology). *1st International Conference on Waste Management and Recycling*.
4. **Zare Shahne**, M., Askari, M., 2012. Study of food waste management in Iran and Offering strategy, goals and rules to improve it. *1st International Conference on Waste Management and Recycling*.
5. **Zare Shahne**, M., Arhami, M., 2013. PM and its fluctuations monitoring in Tehran. *2st National Conference of Air and Noise Pollution*.
6. **Zare Shahne**, M., Azizian, S., Vakilifard, N., 2012. Check the concentration of different elements and factors affecting them in rivers. *1st National Conference of Stream and water pollution*.
7. **Zare Shahne**, M., Vakilifard, N., Azizian, S., 2012. Management strategy for nitrate removal from water. *1st National Conference of Stream and water pollution*.
8. Azizian, S., Vakilifard, N., **Zare Shahne**, M., 2013. Study on effective processes in artificial wetland's plants. *1st National Conference of Protection of Wetlands and Aquatic Ecosystems*.

REPORT PUBLICATIONS

Some reports on Source Apportionment of PM_{2.5} in Tehran for Air Quality Control Company (2016).

REFERENCES

1. Dr. Mohammad Arhami, arhami@sharif.edu
2. Dr. Behzad Ataei, ataie@sharif.edu
3. Dr. Mirmosadeq Jamali, jamali@sharif.edu
4. Dr. Masoud Aqatajrishi, tajrishi@sharif.edu
5. Dr. Mohammad Raei, raie@sharif.edu
6. Dr. Ammar Safaei, asafaie@sharif.edu