Zahra Maleki Shahraki

EIT, PhD Candidate in Environmental Engineering

zhr.malekish@gmail.com

Phone: +1(347)213-2619

Education

Ph.D. Environmental Engineering
(Expected graduation: Sep 2021)
Stony Brook University, NY, US
M.Sc. Civil Engineering 2015
Sharif University of Technology, Tehran, Iran
B.Sc. Civil Engineering 2013
Sharif University of Technology, Tehran, Iran

Certifications & Memberships

EIT
ID 172732, Jan 2021
WEF, NYWEA
AWWA
S.M. ASCE
ACS

Skills

Data analysis
Origin Pro, SPSS, Microsoft Excel, SQL
Coding skills
MATLAB, Python, R
General software
Microsoft Word, Power Point, LATEX
Software expertise
ArcGIS Pro, AutoCAD Civil 3D, HEC-RAS, HEC-HMS, EPANET

Environmental analysis
Standard water & wastewater examination methods: HACH, LACHAT.
ASCE standard methods

Management skills
Critical thinking
Team player as well as independent
Organization skills
Adaptive
Taking initiatives

Selected Graduate Courses

Modern Methods of Data Analysis
Management Decision Models
Water Resources Quality Management
GIS Fundamentals
Environmental Hydrodynamics
Environmental Physical & Chemical Processes
Environmental Biotechnology

Summary

Environmental engineer (EIT) with +4 years of experience in water/wastewater/stormwater engineering and technologies, hydraulic design, and biogeochemical processes. Fast learner and passionate, willing to obtain new experiences and diversify my skills. Proficient in data visualization, data analysis, laboratory management; and fieldwork; with expertise in a range of software such as ArcGIS Pro and AutoCAD. I also possess advanced communication skills including producing regular technical reports for funding agencies; and preparing presentations/publications for prestigious associations.

Experiences

Graduate Research Assistant
New York State Center for Clean Water Technology (CCWT)
Stony Brook, NY. 2016 – 2021

- Site visits, inspection, sample analysis, data collection, data analysis, and evaluation of proprietary treatment systems according to Environmental Laboratory Approval Program.
- Working on several projects funded by NYS DEC and writing quarterly and annual technical reports.
- Contribution in the design and development of the experimental Wastewater Research & Innovation Facility (WRIF).
- Collaboration in writing proposals for various projects including reuse, and recycling of vehicle wash water for NYS DOT.
- Legacy pollution study in coastal areas of Long Island, NY in collaboration with Suffolk County Department of Health Services, NY.
- Calculation, design, and drawing of sustainable remediation systems including biofilters and stormwater systems.
- Design and implementation of various biogeochemical treatments.
- Water distribution hydraulic calculation and modeling by tracer tests, HEC software, and EPANET.
- Data analysis and data visualization using Excel, MATLAB, SPSS, R and OriginPro.
- Use of different materials in nutrient, pathogen and PPCP removal including biochar.
- Different material (e.g., biochar) characterization and modification.
- Innovative anammox wastewater treatment process design using zeolite fixed bed system.
- Geospatial data analyses with ArcGIS Pro.

Graduate Research Assistant
Biochemical & Bioenvironmental Engineering Research Center (BBRC)
Sharif University of Technology, Tehran, Iran. 2014 – 2015

- Planning, calculation, and design of a small-scale moving bed bioreactor.
- Developing empirical steady state kinetic regression model for nutrient removal.

Intern
Roads and Urban Development Organization
Tehran, Iran. July – October 2013

- Project cost estimation calculation.

Volunteering

- Supervising research projects of three undergraduate students, Civil Engineering Department, Stony Brook University, NY, US. 2019 – 2021.
- Instructor of environmental engineering lab rotation for Women in Science and Engineering (WISE) program, Stony Brook University, NY, US. 2020.
- Secretary of Iranian Graduate Students Association, Stony Brook University, NY, US. 2019 – 2021.

Selected Publication & Presentations

1. Z M Shahraki, et al. Effects of biochar amendment on nitrogen transformation in the bench-scale nitrogen removing biofilter (NRB) for onsite wastewater treatment. **NYWEA** Virtual Spring 2020 Meeting.
2. Z M Shahraki, et al. Characterization of nitrogen transformation in the nitrification layer of both lab-scale and pilot-scale Nitrogen Removing Biofilters (NRB). **American Chemical Society** 257.
3. Z M Shahraki, et al. A mechanistic understanding of the sand layer performance in a nitrogen removing biofilter (NRB) treating onsite wastewater. In process: **Ecological Engineering Journal**.
4. Z M Shahraki et al. Potential release of legacy nitrogen from soil surrounding onsite wastewater leaching pools. **Water Research Journal**, 169,115241.
5. Z M Shahraki et al. Impact of legacy nitrogen in conventional septic system on nitrogen removal for onsite wastewater treatment. **American Chemical Society** 255.