

Masoud Fakharifar., EIT, LEED Green Associate

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SUMMARY

Graduate engineer with Master's Degrees in Civil Engineering and Environmental Engineering. Strong Civil/Environmental Engineering background in site development, hydraulic design, contaminant fate and transport in groundwater, stormwater management, erosion and sediment control plans, environmental compliance, water resources and treatment, field work, data analysis, remediation technologies, and writing of technical reports. Professional experience includes working at a consultancy firm conducting engineering calculations and drawings, field work, data analysis, and preparation of technical field reports for multiple project managers with set deadlines.

EDUCATION

Master's in Civil-Environmental Engineering , University of Massachusetts Dartmouth, MA. GPA:3.63	Dec 2019
Graduate level coursework in Environmental Eng. , Southern Illinois University Carbondale, IL. GPA:3.75	Aug 2017
Master's in Environmental Engineering , University of Tehran, Tehran, Iran. GPA:18.34/20	Feb 2016
Bachelor's in Civil Engineering , Azad Tehran University, Tehran, Iran. GPA:15.46/20	July 2012

CERTIFICATIONS AND CREDENTIALS

EIT	Oct 2018
LEED Green Associate	Nov 2018
OSHA 40 Hour HAZWOPER Training	Jan 2019

RESEARCH AND PROFESSIONAL EXPERIENCE

Graduate Research Assistant, University of Massachusetts Dartmouth Sep 2017- Dec 2019

- Designed water treatment plant by designing coagulation and filtration, sedimentation, and disinfection.
- Performed experimental and modeling approaches of contaminant fate and transport in groundwater.
- Modeled membrane filtration and reverse osmosis in water treatment.
- Studied various methods of stormwater management and erosion control.
- Evaluated release of emerging contaminants in groundwater flow.

Graduate Research Assistant, Southern Illinois University Carbondale Jan 2017- Aug 2017

- Measured zinc oxide, titanium oxide and silver nanoparticles in effluent and biosolid of water treatment plants.
- Investigated a Superfund site environmental site assessment and remedial actions.
- Conducted experiments as part of a project team: total organic carbon, total nitrogen, DNA extraction, dynamic light scattering (DLS), fluorescence microscope, contaminant extraction from plants, soil and earthworm, nanoparticles synthesis, scanning electron microscope (SEM) and ICP-MS analysis.
- Collected groundwater samples from USDOJ Superfund site with applicable EPA methods and measured 1-4 dioxane as an emerging contaminant by a gas chromatography device.
- Wrote a project proposal for the North Central Soybean Research Program.
- Hosted undergraduate students of SIU to explain projects of our research team.

Civil Engineer, Vima-ir Co., Iran May 2015- Oct 2016

- Assisted project managers by preparing the project's draft report revision and finalizing it per their comments.
- Prepared project progress summary for senior level managers through collaboration and communication with 25 field engineers.
- Performed tasks collaboratively with other engineers from obtaining field data in the early design phase to delivering processed data for contract documents.
- Collaborated in civil engineering calculations, designs, and drawings for several projects.

- Drafted AutoCAD dimensional construction drawings, data gathering, quality control, field work, oversight of subcontractors, and prepared permits.
- Conducted construction cost estimates, field inspections, and prepared field reports.

SKILLS

- Software: AutoCAD, Hydrus, HyrdoCAD, Civil 3D, Hydraflow, Hec Ras, GIS (Geographic Information Systems), ISWM, LandGEM, MNMs, HELP, SimaPro, MATLAB, Microsoft Office software suite (MS Word, Excel, PowerPoint, Access), Microsoft Project, Photoshop CS, CADD, and Minitab
- Statistical evaluation of numeric data and experimental design
- Excellent written and oral communication skills; ability to prepare reports and proposals
- Valid driver's license

RELEVANT COURSEWORK

- **Solid Waste Management**
 - Hazardous waste management
 - CERCLA and SARA acts
 - Sanitary landfill
 - Waste recycling
 - Composting
- **Water Treatment**
 - Water and wastewater treatment
 - Water quality engineering
 - Water resources
 - Treatment plant planning, design, construction
- **Waste to Energy**
 - Energy and environment
 - Conversion of waste to energy
- **Environmental Geology**
 - Subsurface contaminants
 - Collect data and samples
 - Contaminant fate and transport
 - Conduct laboratory analysis of samples
 - Emerging Contaminants
 - Subsurface remediation technologies
- **Civil Engineering**
 - Field engineering
 - Design plans and specifications
 - Construction cost estimates
 - Geotechnical engineering
 - Hydraulic and hydrology

SELECTED PUBLICATIONS AND PRESENTATIONS

- Liu, J., Williams, P. C., Geisler-Lee, J., Goodson, B. M., Fakharifar, M., Peiravi, Gemeinhardt, M. E. (2018). Impact of wastewater effluent containing aged nanoparticles and other components on biological activities of the soil microbiome, Arabidopsis plants, and earthworms. Environmental research, 164, 197-203.
- Fakharifar, M., Taghavy, A., (2018). A two-site filtration model for 14C-labeled few-layer graphene mobility in saturated porous media: Effect of ionic strength. AGU Fall Meeting 2018.
- Fakharifar, M., Taghavy, A., (2019). Assessment of the effects of organic macromolecules on the mobility of 14C-labeled few-layer graphene nanoparticles in saturated porous media. 2019 EWRI Congress
- Fakharifar, M., Ghayuri, I., Yousefi, P. "Environmental Aspects of Silver Nanoparticles". International Conference on Environmental Science, Engineering and Technologies (CESET 2015), Tehran, Iran.
- Fakharifar, M., Yousefi, P. Ghayuri, I., "Possible Environmental Implications of Manufactured Carbon Nanotube". International Conference on Environmental Science, Engineering and Technologies (CESET 2015), Tehran, Iran.

HONORS AND AWARDS

- Full graduate assistantship and paid tuition, M.Sc. Program, University of Massachusetts 2017-2019
- Admitted to the University of Tehran (top-ranked university in Iran) with a full scholarship 2013-2016