

# Mohsen Talebsafa, EIT

«U.S. Lawful Permanent Resident»

Competent, dedicated & resourceful civil engineer experienced in Pavement Design, Pavement Management & Construction Materials.

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## AN OVERVIEW

- +3 years of experience in characterization of construction materials.
- +2 years of experience in design of concrete and steel building structures.
- Well-versed in designing flexible and rigid pavements and evaluating pavement rehabilitation techniques.
- Well-versed in infrastructure asset management, performance measures, and financial planning.
- Leader and ability to work collaboratively within a team on multiple assignments.
- Adaptable and quick learner, possessing skills to think independently and work under the pressure.
- Author of 4 journal papers and 7 conference papers.

## EDUCATIONS

**Ph.D.** – Infrastructure System Engineering & Management – University of Texas at Arlington – Expected May 2021

Dissertation: “*Optimization of Concrete Pavement Design to Truck Platoon Loading*”

**M.Sc.** – Road and Transportation Engineering – Semnan University – Sep. 2013

Thesis: “*Dynamic Finite Elements Analysis of Flexible Pavements and Development of an Artificial Neural Network Model for Predicting Critical Responses*”

**B.Sc.** – Civil Engineering – University of Mazandaran – June 2011

Thesis: “*A Review of The Use of Waste Materials in Asphalt Pavements*”

## RELATED GRADUATE COURSEWORKS

- |  |                                  |
|--|----------------------------------|
| • Pavement Evaluation, Rehabilitation, and Management System | • Asphalt Concrete Design        |
| • Infrastructure Evaluation, Maintenance, and Renewal        | • Rigid Pavements                |
| • Management of Infrastructure Assets                        | • Foundation Analysis and Design |
| • Pavement Design  | • Highway Geometric Design       |
|  | • Airport Engineering            |

## WORK EXPERIENCE

**METROPOLITAN INFRASTRUCTURE PLLC, GARLAND, TX**

**Civil Engineering Intern, Jan 2021 -Present**

- Analyzing and interpreting survey maps, topography and production of drainage area maps with runoff calculations.
- Designing stormwater and sewer systems and production of pipeline utility plans.
- Site development by OpenSite Designer, production of site plans & following government standards.
- Street and alley design, production of plan and profile, and cross sections using OpenRoads Designer.
- CAD drawing using MicroStation & assisting engineers in design and report writing.

**UNIVERSITY OF TEXAS AT ARLINGTON, ARLINGTON, TX**

**Graduate Research Assistant, Aug 2017 -Present**

**Optimization of asphalt mixes containing various percentages of Recycled Asphalt Pavement (RAP) and Recycled Asphalt Shingles (RAS).** (In Progress) – *TxDOT Project*

- Designed and constructed accelerated aging box for artificially aging the surface asphalt layer.
- Obtaining experience on full-scale accelerated testing of asphalt pavement using Pavement Testing Machine (PTM).
- Performing field and laboratory testing on asphalt pavement mixes.
- Preparing Tech Memos and reports, attending monthly progress meetings.

**The Impact of Hurricane Harvey on Pavement Structures in the South East Texas and South West Louisiana.** –*US Department of Transportation Project*

- Led the research team in analyzing the city of Houston network's streets condition and its evolution caused by flooding.

- Developed and formulated pavement performance evolution models for each road section in the network for Pavement Condition Index (PCI) and International Roughness Index (IRI).
- Developed framework and system improvement strategy for replanning and optimization of rehabilitation measures on streets affected by floods.
- Provided life cycle cost analysis on users' and agency's cost for different rehabilitation techniques.
- Developed a framework to estimate the increase in fuel consumption caused by the increased pavement roughness.
- Obtained enhanced problem solving, critical thinking, and time management skills.

**Evaluation of Comparative Damaging Effects of Multiple Truck Axles for Flexible Pavements. – US Department of Transportation Project**

- Gained hands-on experience in field pavement structure strains measurement using strain gauges.
- Developed a more accurate methodology for quantifying pavement damage under consecutive truck axle loads.
- Performed sampling of asphalt pavement and characterization of the viscoelastic properties of asphalt mixtures.
- Performed finite element analysis on asphalt pavement structure.
- Led the research team to perform data analysis, provide deliverables of the project, and prepare research reports.

**Graduate Teaching Assistant, Jan 2020-Aug 2020**

- Instructed “Civil Engineering Material Laboratory” course.
- Supervised up to 60 undergraduate students per semester.
- Gained profound experience on performing laboratory tests on construction materials.

**MILAD DESIGN AND CONSULTANT CO, IRAN**

**Civil Designer, Dec 2014-June 2017**

- Designed more than 50 residential concrete and steel structures using ETABS software.
- Designed foundation of structures using SAFE software.
- Coordinated the design work with other design staff engineers and architects.
- Prepared detailed construction documents, site plans, and cost estimate.

**SHAGHAYEGH SORKH AFLAK CO, IRAN**

**Field Engineer, Dec 2012-Nov 2014**

- Acquired the ability of managing field activities, implementing engineering design and paying attention to details.
- Worked closely with the project manager for RFIs and follow-ups.
- Participated in project engineering reviews, studies and site investigations, and prepared progress reports.
- Performed QA/QC for construction materials (concrete and asphalt mixes).
- Obtained communication skills in working directly with clients as a liaison with contractors in the field.

**ZIBA KOOMEH SAZ MAZANDARAN CO, IRAN**

**Civil Engineering Intern, June 2011-Sep 2011**

- Inspected the project site to ensure proper installation.
- Assisted with the field works, surveying and report production.
- Performed concrete mix sampling and laboratory testing.

**COMPUTER SKILLS**

- |                      |            |                      |
|----------------------|------------|----------------------|
| • MicroStation       | • Civil 3D | • ETABS              |
| • OpenRoads Designer | • ARCGIS   | • SAFE               |
| • OpenSite Designer  | • ABAQUS   | • Microsoft Projects |
| • AutoCAD            | • MATLAB   | • Microsoft Office   |

**AWARDS**

Fort Worth Branch ASCE Scholarship

**MEMBERSHIP**

- American Society of Civil Engineers (ASCE), Feb 2018- Present
- American Concrete Institute (ACI), March 2019- Present