Masih Beheshti

PhD Student and Graduate Research Associate

@ beheshti@asu.edu | www.masihb.com | Tempe, Arizona | April 1996 | in linkedin.com/in/masih-beheshti

EDUCATION

PhD. in Civil Engineering

Arizona State University

January 2022 – Present | Tempe, Arizona

- Supervisor: Dr. Hasan Ozer

M.Sc. in Civil and Environmental Engineering

Sharif University of Technology

September 2018 – March 2021 | Tehran, Iran

- GPA: 3.77 (17.05/20)
- Thesis: Sustainability Assessment of Preventive Maintenance Plans (Case Study: Slurry Seal and Thin Overlay)
- Supervisor: Prof. Nader Tabatabaee

B.Sc. in Civil and Environmental Engineering

Isfahan University of Technology

September 2014 – September 2018 | Esfahan, Iran

- GPA: 2.78 (14.63/20)

Diploma in Mathmatics and Physics

Sadat High School

September 2010 - September 2014 | Esfahan, Iran

- GPA: 4 (19.61/20)

ACADEMIC EXPERIENCES

Graduate Research Associate

Arizona State University

December 2021 – Present | Tempe, Arizona

- Current Project: Reflective Cracking Model for Airport Asphalt Overlay Design
- Supervisor: Dr. Hasan Ozer

Teaching Assistant

Sharif University of Technology

February 2020 – July 2020 | Tehran, Iran

- Course Title: Geometric Design of Highway
- Instructor: Dr. Mohammad Reza Sabouri

Pavement Laboratory Assistant

Sharif University of Technology

September 2019 – February 2020 | Tehran, Iran

- Supervisor: Prof. Nader Tabatabaee

MY LIFE PHILOSOPHY

"Always challenge yourself to do more & to know more"

PROGRAMMING SKILLS

Python | Matlab | C++

SOFTWARE SKILLS

- Microsoft Office:
  Word | Excel | PowerPoint
- Traffic Modelling:
  PTV Vissim | Synchro
- Road/Pavement Design and Analysis:
  Civil3D | AASHTOWare | KenPave | Elmode
- Optimization and Data Analysis:
  STATA | Lingo | SPSS
- Building Structure Modeling and Analysis
  ABAQUS | Etabs | SAFE | SAP2000 | AutoCAD | Revit
- Other:
  Premiere | Photoshop | SimaPro | Wordpress | Google Earth Engine

Internship

Foolad Technic International Engineering Company

July 2018 – August 2018 Esfahan, Iran

- Project Description: Designing an industrial shed

PROFESSIONAL EXPERIENCES

Computer Technician

Isfahan University of Technology

October 2017 – May 2018 Esfahan, Iran

- Job Description: Worked as a part time computer repair technician for civil engineering IT department

Construction Worker

Farshadi Complex

July 2017 – August 2017 Farshadi Street, Esfahan, Iran

- Job Description: Worked as a construction plumber

Freelancing Jobs

- Design of brochure for Sharif Remote Sensing Research Center (November 2019)
- Teaser video creator and control room operator for second National Spaghetti Bridge-Building Competition held by Isfahan University of Technology (August 2019)
- Video editor and control room operator for 11th new year celebration event held by department of civil engineering of Isfahan University of Technology (April 2018)
- Design of business cards for Partak Saze Arman Shahr LTD. (January 2018)

RESEARCH INTERESTS

- Pavement Numerical Modeling
- Life Cycle Assessment
- Data Analysis

RESEARCH EXPERIENCE

Reflective Cracking Model for Airport Asphalt Overlay Design

Supervisor: Dr. Hasan Ozer

December 2021 – Present

- FAA's structural design for overlays does not consider reflective cracking. The objective of this project is to develop an HMA overlay thickness design for FAARFIELD software.

Development of a Sustainability Assessment Computer Application

Supervisor: Prof. Nader Tabatabaee

April 2020 – November 2021

- PaveSAT is a computer program capable of conducting LCA, LCCA, and performance evaluation of different maintenance strategies in order to determine the most sustainable maintenance strategy using multi-criteria decision-making methods (MCDM). PaveSAT provides a flexible framework with a variety of features. Using Qt5 framework to present a user-friendly environment, considering the uncertainty associated with LCA, LCCA, pavement performance models using Monte Carlo simulation, and a flexible life cycle inventory (LCI) are only some of the key features of PaveSAT.

LANGUAGES AND TESTS

Farsi (Native Language) ●●●●●

English (Sec Language) ●●●●●

TOEFL iBT: 102 (R: 26, L: 27, W: 24, S: 25)

GRE General: 320

Verbal Reasoning = 153/170

Quantitative Reasoning = 167/170

Analytical Writing = 4.0/6.0

EXTRA CURRICULAR

Swimming | Hiking | Watching Movies and Listening to Music | Board Games | Cooking

REFERENCES

Prof. Nader Tabatabaee

@ nader@sharif.edu

Sharif University of Technology

Markov Chain Performance Modeling for Slurry Seal and Thin Asphalt Overlay

Supervisor: Prof. Nader Tabatabaee

September 2019 – August 2020

- This study assesses different preventive maintenance strategies of slurry seal and thin asphalt overlay. The performance effectiveness of different maintenance strategies were assessed using Markov-chain models based on LTPP SPS-3 dataset. To overcome the problem of limited information limited pavement performance data, Bayesian approach was used to account for the uncertainty of TPM parameters. The existing pavements condition prior to the treatment application was used as the main criterion to distinguish six pavement families. Then, Markov chain models were developed and validated for these families. This research was presented in 12th International Congress on Civil Engineering.

PUBLICATIONS

Journal Articles

- M., Beheshti and Tabatabaee N. (2022). "PaveSAT: a Tool for Sustainability Assessment of Pavement Maintenance Strategies Under Different Levels of Uncertainty". In: (Already written, but not submitted yet).

Conference Proceeding

- M., Beheshti and Tabatabaee N. (2021). "Markov Chain Performance Modeling for Slurry Seal and Thin Asphalt Overlay Using Bayesian Approach". In: *12th International National Congress on Civil Engineering*.
- M., Beheshti, Molayee Nasab S., et al. (2020). "Comparison of Time Delay Models at Unsaturated Signalized Intersections (Case Study: Akbari-Salehi Intersection) [in Farsi]". In: *12th National Congress on Civil Engineering*.

CERTIFICATES AND WORKSHOPS

Mechanistic Machine Learning for Engineering and Applied Science

2021 San Diego, CA

A workshop on application of artificial neural network (ANN) in field of solid mechanics. This workshop was a part of Mechanistic Machine Learning and Digital Twins for Computational Science, Engineering Technology (MMLDT-CSET) 2021 conference in San Diego, CA

Deep Learning Specialization

2020 Coursera (Offered by deeplearning.ai)

5 courses on the Deep Learning were completed. Topics such as convolutional and recurrent neural networks, and strategies such as Dropout, BatchNorm, and Xavier/He initialization were discussed in these courses.

Remote Sensing Workshop

2019 Tehran, Iran

A workshop on remote sensing using Google Earth Engine platform held by Remote Sensing Research Center of Sharif University of Technology