

Sara Navidi

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Objective

A full-time position in geotechnical engineering with an emphasis on geotechnical earthquake engineering.

Education

Ph.D., Geotechnical Engineering, May 2012

The University of Texas at Austin

Master of Science in Civil Engineering, Geotechnical Engineering, October 2004

University of Tehran, Ir.

Bachelor of Science, Civil Engineering, July 2002

University of Tehran, Ir.

Related Courses

Foundation Engineering, Geotechnical Earthquake Engineering, Soil and Rock Dynamics, Stability of Earth Slopes, Continuum Mechanics, Seepage and Earth Dams, Rock Engineering, Tunneling, Site Investigation, Geoenvironmental Engineering, Geology, Numerical Computation Methods, Data Analysis, Decision, Risk and Reliability, Mathematical Statistics for Applications, and Advanced Analysis of Geotechnical Engineering

Research Projects

Dissertation:

Models of Site Amplification for Use in Ground Motion Prediction Equations (PEER Funded Project)

The University of Texas at Austin, Aug 2008-Present

- Generated shear wave velocity profiles using baseline shear wave velocity profiles.
- Performed equivalent linear site response analysis on the synthetically generated soil profiles applying RVT method using STRATA to investigate site parameters which affect site amplification beyond average shear wave velocity in the upper 30 meters and depth to the rock.
- Developing a site amplification model for use in ground motion prediction equations by conducting site response analysis on a suite of fully randomized shear wave velocity profiles, using JMP software for doing regression analysis.

Embankment Settlement on Soft Soils

University of Houston, June 2006-December 2007

- Monitored pore pressures, and lateral and horizontal movements in the soil next to two embankments in the greater Houston area.
- Using PLAXIS for embankment settlement assessment.

Thesis:

Seismic Response of Landfills

University of Tehran, Ir., October 2003-October 2004

- Modeled municipal solid waste landfills using ADINA, a finite element computer package.
- Investigated the effect of input motion characteristics such as peak ground acceleration, geometrical properties of landfills and waste material properties on seismic behavior of landfills.

Experience

09/04-05/06

Project Engineer, DKP Engineering Co, Tehran, Ir.

- Visited sites and decided the required field and lab tests. Analyzed the results of the performed tests and defined the soil profiles of the sites. Prepared geotechnical reports based on the analyzed data from the tests and geological information of the studied area.
- Designed foundations and piles using manual calculation methods and engineering softwares such as PLAXIS and LPILE Plus.

06/01-08/01

Civil Engineering Intern, Soil Engineering Services Consulting Engineers, Tehran, Ir.

Extruded soils from Shelby tubes. Prepared soils samples for performing lab tests on them. Performed identification test, plasticity index, direct shear, unconfined compression, compaction, and consolidation tests.

Academic Experience

Graduate Research Assistant, The University of Texas at Austin

Modifying site amplification models for use in ground motion prediction equations.

Teaching Assistant at The University of Texas at Austin

Geotechnical Engineering, Fall 2008, Fall 2011.

Taught undergraduate students to perform geotechnical laboratory tests in geotechnical engineering lab.

Grader at The University of Texas at Austin

Geotechnical Engineering, Spring 2008.

Foundation Engineering, Fall 2011.

Teaching Assistant and Grader at University of Houston

Geotechnical Engineering, Spring 2007, Fall 2007, Supervised undergraduate students in Geotechnical Engineering lab.

Skills

Experience with laboratory soil tests

Software: MATLAB, PLAXIS, LPILE , ADINA, AutoCAD, R, JMP, GRAPHER, and Strata

Languages: Persian (Native)

Educational Honors

Ranked 137 out of over 450,000 Iranian students in B.Sc. entrance examination.

Ranked 70 out of over 9000 Civil Engineering students in national Iranian M.Sc. entrance exam.

Ranked among top 5% among undergraduate students in the field of civil engineering at The University of Tehran.

Ranked among top 10% among M.Sc. students of geotechnical engineering at The University of Tehran.

Professional Service

Vice President, University of Texas **Earthquake Engineering Research Institute (EERI)** Student Chapter, 2010- Present.

Secretary, University of Texas **Earthquake Engineering Research Institute (EERI)** Student Chapter, 2008- 2010.

Member, **Earthquake Engineering Research Institute (EERI)**, 2008-Present.

Member, **Geo-Institute**, 2008-Present.

President, **Civil Engineering Association** of Class 2002, University of Tehran.

Publications and Presentations

Sara Navidi, 2004, Seismic Response of Landfills, Master thesis, University of Tehran.

B. Gatmiri and S. Navidi, 2006, Seismic Response of Landfills, Proceedings of The ISSMGE's fifth international congress organized by the Geoenvironmental Research Center, volume I, pages 1352-1359.

Rathje, E.M. and Navidi, S., 2009, Assessment of Site Parameters as Predictors for Site Amplification, Seismological Society of America Annual Meeting, Monterey, CA, 8-10 April, (Abstract only published in Seismological Research Letters, 80(2), p. 364).

"Identification of Site Parameters beyond VS30 that Improve Site Amplifications Prediction in GMPEs", Poster Presentation at QUAKE SUMMIT 2010, NEES & PEER Annual Meeting, San Francisco, October 2010.

Rathje, E.M. and Navidi, S., 2011 Beyond Vs30: What site parameters can improve site amplification predictions? Presented in EERI Annual Meeting, San Diego, CA, February.

Sara Navidi and Ellen Rathje, 2012, Site Characteristics Influencing Soil Amplification, 15th World Conference on Earthquake Engineering, Lisbon, Portugal, 24-28 September (Abstract submitted).