Sima Mashhadi

Education:

Doctor of Philosophy (Ph.D.):
Filed - Program: Civil Engineering- Structural Engineering
University: Yazd University
Graduation Date: May 5, 2021

Master of Science (M.Sc.):
Filed - Program: Civil Engineering- Structural Engineering
University: Bahonar University of Kerman
Graduation Date: January 20, 2014

Bachelor of Science (B.Sc.):
Filed - Program: Civil Engineering- Civil Engineering
University: Bahonar University of Kerman
Graduation Date: April 10, 2011

Thesis and Dissertation:

Ph.D. Dissertation
Title: Investigating the effects of Near-Fault Earthquake Components on Fragility Curves of Setback Steel Frames Considering the Soil-Structure Interaction
Supervisor: Dr. Azita Asadi
Grade: 19.75 (out of 20)

M.Sc. Thesis
Title: Evaluation of the Existing Steel Buildings under Blast Loads by Nonlinear Dynamic Analysis
Supervisor: Professor Mohammad Javad Fadaee
Grade: 19.25 (out of 20)

Dr. Sima Mashhadi

Fields of Research interests:

- ✓ Structural Engineering
- ✓ Earthquake Engineering
- ✓ Structural Dynamics
- ✓ Probabilistic seismic analyses
- ✓ Reliability Analysis
- ✓ Soil-Structure Interaction

Academic teaching experiences:

Higher Education Complex of Bam:

Courses:

- Advanced Engineering Mathematics
- Dynamics of Structures
- Stability of Structures
- Earthquake and Wind Engineering
- Statics
- Structural Analysis 1
- Structural Analysis 2
- Foundation Engineering

Azad University of Kerman

Courses:

- Statics
- Concrete Technology
- Deterioration and Duration of Concrete
- Mechanics of Materials

Besat Institute of Higher Education of Kerman

Courses:

- Steel Structures
- Concrete Structures

Dr. Sima Mashhadi

Publications:

<u>International Scientific Indexing (ISI) Journals:</u>

[1] Sima Mashhadi, & Farshad Homaei. (2023). Soil-structure interaction and frequency components of near-fault records on the performance-based confidence levels of steel setback MRFs. *Soil Dynamics and Earthquake Engineering,* 166, 107759. https://doi.org/10.1016/j.soildyn.2023.107759

[2] Farshad Homaei, & Sima Mashhadi. (2021). The effect of pulse-like ground motion on the performance-based confidence level of setback special steel moment-resisting frames. *Journal of Building Engineering*, 44, 103327. https://doi.org/10.1016/j.jobe.2021.103327

[3] Sima Mashhadi, Farshad Homaei, Azita Asadi, & Hamed Tajammolian. (2021). Fragility analysis of steel MRFs: Effects of frequency-content components of near-fault pulse-like ground motions and setbacks. *Structures*, 33, 3655-3666. https://doi.org/10.1016/j.istruc.2021.06.087

[4] Sima Mashhadi, Azita Asadi, Farshad Homaei, & Hamed Tajammolian. (2021). Seismic response of mid-rise steel MRFs: the role of geometrical irregularity, frequency components of near-fault records, and soil-structure interaction. *Bulletin of Earthquake Engineering*, 19(9), 3571-3595. 10.1007/s10518-021-01103-2

[5] Sima Mashhadi, Azita Asadi, Farshad Homaei, & Hamed Tajammolian. (2020). The performance based seismic response of special steel MRF: Effects of pulse-like ground motion and foundation safety factor. *Structures*, 28, 127-140. https://doi.org/10.1016/j.istruc.2020.08.040

<u>Conference & Proceedings:</u>

[1] Sima Mashhadi, Azita Asadi, Farshad Homaei, & Hamed Tajammolian. (2020). Seismic response evaluation of setback steel frames subjected to near-fault pulse-like ground motions. *5th International Conference on Structural Engineering*, Tehran, Iran

[2] Sima Mashhadi. (2015). Securing Buildings against Fire: Structural Design and Materials Selection. *The Annual International Civil, Architecture, and Urbanism Conference*, Shiraz, Iran (in Persian)

[3] Sima Mashhadi, Mohammad Javad Fadaee. (2014). Evaluation of the Existing Steel Buildings under Blast Loads by Nonlinear Dynamic Analysis. *15th Civil Students Conference Nationwide*, Urmia University, Iran (in Persian)

<u>Books:</u>

[1] Azita Asadi, Sima Mashhadi, Hossein Jarrahi. (2020). Loading. *Yazd University*, Yazd, Iran

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Invited Reviewer:

- ✓ Practice Periodical on Structural Design and Construction (ASCE)
- ✓ Scientia Iranica (Sharif University of Technology)

Honors and Awards:

- ✓ 2004: Ranked 2nd among all the graduates of high school in Mathematics and Physics, Dr. Hesabi Educational Center, Kerman

- ✓ 2005: In the top 1% of the accepted students, in National Entrance Examinations for Bachelor program.

- ✓ 2011: Ranked 4th among all the graduates of the bachelor's degree in Civil Engineering, Bahonar University of Kerman

- ✓ 2011: In the top 3% of the accepted students, in National Entrance Examinations for Master program.

- ✓ 2014: Ranked 5th among all the graduates of the master's degree in Civil Engineering, Bahonar University of Kerman

- ✓ 2016: In the top 1% of the accepted students, in National Entrance Examinations for PhD program.

- ✓ 2021: Top researcher award among all the graduates of Ph.D. degree in Civil Engineering, Yazd university

- ✓ 2021: Ranked 1st among all the graduates of Ph.D. degree in Civil Engineering, Yazd university

Software Expertise:

International Computer Driving Licence (ICDL)

No.	Software Name	Application
1	Microsoft Office - Word	Writing text
2	Microsoft Office - Excel	Numerical data processing
3	Microsoft Office - PowerPoint	Preparing slides, posters, and ...
4	Microsoft Office - Visio	Diagramming and vector graphics
5	EndNote	Resource management

Architectural & Drawings

No.	Software Name	Application
1	Autodesk AutoCAD	Draw structural and architectural drawings

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Analysis & Design of Structures

No.	Software Name	Application
1	CSI ETABS	Analysis and design of steel and concrete buildings
2	CSI SAP2000	Analysis and design of steel and concrete buildings, industrial structures, …
3	CSI SAFE	Analysis and design of foundations

Earthquake Record Processing

No.	Software Name	Application
1	SeismoSoft - SeismoSignal	Generating of linear and nonlinear spectra of earthquake records
2	SeismoSoft - SeismoSpec	Earthquake spectrum processing and generating linear and nonlinear spectra for a set of earthquake records

Nonlinear Structural Modeling & Analysis

No.	Software Name	Application
1	Open System of Earthquake Engineering Simulation (OpenSees)	Nonlinear modeling and analysis of various structural and geotechnical models

Programming

No.	Software Name	Application
1	MATLAB	Programming and production of graphic apps through the graphical module

Soft Computing

No.	Software Name	Application
1	MATLAB Optimization Toolbox	Data classification, regression analysis, and optimization of problems

Working Experiences:

- ✓ Kalout Consulting Engineering Co., Technical office, 2011-2012 & 2021-present
- ✓ Cooperation Organization of Kerman Province Municipalities, 2008-2015
- ✓ Asia Language Institute, English teacher