

CURRICULUM VITAE

Kiarash M. Dolatshahi

Sharif University of Technology
Department of Civil Engineering

Personal Information

Address: Iran, Tehran, Sharif University of Technology, Department of Civil Engineering, Room 515
Date of Birth: September 20, 1984
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Professional Background

August 2016- December 2016: Visiting Professor
École polytechnique fédérale de Lausanne, EPFL, Lausanne, Switzerland

August 2012 – current: Assistant Professor
Sharif University of Technology, Tehran, Iran

May 2009 – January 2012: Research Assistant
Department of Civil, Structural and Environmental Engineering, University at Buffalo, NY, USA

January 2009 – May 2009: Teacher Assistant

Department of Civil, Structural and Environmental Engineering, University at Buffalo, NY, USA

University Service

Vice President in Student Affairs, Sharif University of Technology, 2013- 2016

Head of Earthquake Engineering Group, Sharif University of Technology, 2017-present

Education

Degree: Ph.D. University at Buffalo, The State University of New York, 2008-2012

Major: Structural and Earthquake Engineering

Thesis: Computational, analytical and experimental modeling of masonry structures

Advisor: Professor Amjad J. Aref

Degree: M.Eng. University at Buffalo, The State University of New York, 2008-2010

Degree: M.S. Sharif University of Technology, 2006-2008

Major: Structural Engineering

Thesis: The Application of Inverse Vibration in Modifying the Dynamic Properties of Damped MDOF Structural Models

Advisor: Professor F. Rahimzadeh

Degree: B.S. Sharif University of Technology, 2002-2006

Research Interests

Earthquake Engineering

Computational Mechanics and Numerical Methods (Finite Element, Boundary Element)

Awards and Honors

Ranked 8th amongst 16010 participants in Iranian graduate nationwide entrance exam (2006)

Silver Medal, National Civil Engineering Olympiad (2006)

Third place winner in poster competition, MCEER (2011)

Technical Reviewer

ASCE Journal of Structural Engineering

ASCE Journal of Bridge Engineering

Engineering Structures

Journal of Earthquake Engineering

Construction and Building Materials

Thin-Walled Structures

List of Publications

Refereed Journals

- 1- **Dolatshahi, Kiarash M.**, and Amjad J. Aref. "Two-dimensional computational framework of meso-scale rigid and line interface elements for masonry structures." *Engineering Structures* 33.12 (2011): 3657-3667.
- 2- Aref, Amjad J., and **Kiarash M. Dolatshahi**. "A three-dimensional cyclic meso-scale numerical procedure for simulation of unreinforced masonry structures." *Computers & Structures* 120 (2013): 9-23.
- 3- **Dolatshahi, Kiarash M.**, and Fayaz R. Rofooei. "Inverse vibration problem for un-damped 3-dimensional multi-story shear building models." *Journal of Sound and Vibration* 333.1 (2014): 99-113.
- 4- **Dolatshahi, Kiarash M.**, Amjad J. Aref, and Mohammad Yekrangnia. "Bidirectional behavior of unreinforced masonry walls." *Earthquake Engineering & Structural Dynamics* 43.15 (2014): 2377-2397.
- 5- **Dolatshahi, Kiarash M.**, Amjad J. Aref, and Andrew S. Whittaker. "Interaction Curves for In-Plane and Out-of-Plane Behaviors of Unreinforced Masonry Walls." *Journal of Earthquake Engineering* 19.1 (2015): 60-84.
- 6- Nikoukalam, Mohammad T., Rasoul Mirghaderi and **Kiarash M. Dolatshahi**. "Analytical study of moment resisting frames retrofitted with shear slotted bolted connection." *ASCE, Journal of Structural Engineering*, 141.11 (2015)
- 7- Siamak Epackachi, **Kiarash M. Dolatshahi**, Nicholas D. Oliveto, and Andrei M. Reinhorn. "Mechanical Behavior of Electrical Hollow Composite Post Insulators: Experimental and Analytical Study." *Journal of Engineering Structures*, 93 (2015): 129-141.

- 8- **Dolatshahi, Kiarash M.**, Mohammad Yekrangnia. "Out-of-Plane Strength Reduction of Unreinforced Masonry Walls Due to In-plane Damages." *Earthquake Engineering & Structural Dynamics* 44, (2015) 2157–2176.
- 9- Nikoukalam, Mohammad T., **Kiarash M. Dolatshahi**. "Development of Structural Shear Fuse in Moment Resisting Frames." *Journal of Construction Steel Research* 114 (2015): 349-361.
- 10- Kildashti, Kamyar, **Kiarash M. Dolatshahi**, and Rasoul Mirghaderi. "A Case Study on the Soil-Pile-Structure Interaction of a Long Span Arched Structure." *Structure and Infrastructure Engineering* 12 (2017): 1614-1633.
- 11- **Dolatshahi, Kiarash M.**, Amjad J. Aref. "Multi-directional Response of Unreinforced Masonry Walls: Experimental and Computational Investigations." *Earthquake Engineering & Structural Dynamics*, 45 (2016): 1427–1449
- 12- Chiniforosh A. Alireza A., Homayoon Estekanchi, **Kiarash M. Dolatshahi** "Application of Endurance Time Method in Seismic Evaluation of Unreinforced Masonry Monuments" *Journal of Earthquake Engineering* 21.2 (2017): 181-202.
- 13- Sadeghi Soheil; **Kiarash M. Dolatshahi**, Masoud Mofid "Optimized design procedure for coupling panels in steel plate shear walls" *The Structural Design of Tall and Special Buildings* 26.1 (2017).
- 14- M. T. Nikoukalam, S. R. Mirghaderi, **Kiarash M. Dolatshahi** "Shear slotted bolted connection" *The Structural Design of Tall and Special Buildings* 26.3 (2017).
- 15- Lotfi Alireza, M. H. Haeri, **Kiarash M Dolatshahi**, Ali Akbar Golafshani "Structural Health Monitoring of Offshore Jacket Platforms by Inverse Vibration Techniques" *Applied Ocean Research* 62 (2017): 181-198.
- 16- M. A. Dezfuli, **K. M. Dolatshahi**, M. Mofid; S. Sadeghi "Coreless Self-Centering Braces in Steel Structures" *Journal of Constructional Steel Research* 133 (2017): 485-498.
- 17- Bastian Wilding, **Kiarash M. Dolatshahi**, Katrin Beyer, "Influence of load history on the force-displacement response of in-plane loaded unreinforced masonry walls." *Engineering Structures* 152 (2017): 671-682.
- 18- Mohammad A. Morshedi, **Kiarash M. Dolatshahi**, Shervin Maleki "Double reduced beam section connection" *Journal of Constructional Steel Research* 138 (2017): 283-297.
- 19- Omid Moammer, **Kiarash M. Dolatshahi** "Predictive equations for shear link modeling toward collapse" *Engineering Structures* 151 (2017): 599-612.
- 20- **Dolatshahi, Kiarash M.**, Amir Rezaie, Reza Rafiee-Dehkharghani "Topology Optimization of Wave Barriers for Mitigation of Vertical Component of Seismic Ground Motions" *Journal of Earthquake Engineering* (2017): 1-25.
- 21- **Dolatshahi, Kiarash M.**, Mohammad Nikoukalam, Katrin Beyer, "Numerical Study on Factors that Influence the In-Plane Drift Capacity of Unreinforced Masonry Walls" (*accepted, Earthquake Engineering and Structural Dynamics*)
- 22- Bastian Wilding, **Kiarash M. Dolatshahi**, Katrin Beyer, "Shear-compression tests of URM walls: various setups and their influence on experimental results"

Engineering Structures 156 (2018): 472-479.

- 23- Rezazadeh, Pouya, **Kiarash M. Dolatshahi** "Two Novel Shear Fuses for Moment Resisting Frames" *Journal of Constructional Steel Research 144 (2018) 198–210*
- 24- Mahmoudi, F., **Kiarash M Dolatshahi**, Mahsuli, M., Nikoukalam, M.T., Shahmohammadi, A. (2016) "Steel moment resisting frames with nonlinear shear fuse: Experimental and numerical evaluation" (*revision, ASCE Journal of Structural Engineering*)
- 25- Amir Rezaie, Reza Rafiee-Dehkharghani, **Kiarash M. Dolatshahi**, Seyed Rasoul Mirghaderi "Seismic Metamaterials for Vibration Control of the Structures under Vertically Incident Shear Waves" (*revision, Soil Dynamics and Earthquake Engineering*)
- 26- **Dolatshahi, Kiarash M.**, Amir Vafaie, Kamyar Kildashti, Mohamad J. Hamidia "Seismic Response of Structures Considering Deterioration and Foundation Uplift" (*Submitted*)
- 27- Amir Vafaie, **Kiarash M. Dolatshahi** "Seismic behavior of uplift-allowed soil-pile-structure system" (*Submitted*)
- 28- **Dolatshahi, Kiarash M.**, Katrin Beyer "Estimation of the loss of stiffness and strength of damaged unreinforced brick masonry walls using fractal analysis" (*Submitted*)
- 29- **Dolatshahi, Kiarash M.**, Ali Gharavi, Seyed Rasoul Mirghaderi "Experimental Investigation of Slitted Web Steel Moment Resisting Frame" (*Submitted*)
- 30- Reza Zamani, **Kiarash M. Dolatshahi** , Reza Rafiee "A spectral approach for damage detection in members of beam-like structures using guided waves" (*Submitted*)

Conference Papers or Presentations

- 1- **Dolatshahi, Kiarash M.**, and Aref J. A. (2011) "Analytical and Numerical Study of In-Plane and Out-of-Plane Interaction of Unreinforced Masonry Walls" NEES-MCEER annual meeting, Buffalo, NY June 9-11
- 2- **Dolatshahi, Kiarash M.**, and Aref, J. A. (2011) "Three Dimensional Modeling of Masonry Structures and Interaction of In-Plane and Out-of-Plane Deformation of Masonry Walls" Engineering Mechanics Conference, June 2-4, Boston, MA.
- 3- **Dolatshahi, Kiarash M.**, and Amjad J. Aref "On Bidirectional Testing of Unreinforced Masonry Walls.", 15th World Conference on Earthquake Engineering, Lisbon, Portugal, 2012.
- 4- Nikoukalam, Mohammad T., Rasoul Mirghaderi and **Kiarash M. Dolatshahi**. "Analytical study of shear slotted bolted connection in moment resisting frames. Proceedings of the 10th National Conference in Earthquake Engineering, Earthquake Engineering Research Institute, Anchorage, AK, 2014.
- 5- **Dolatshahi, Kiarash M.**, Yekrangnia M, Mahdizadeh A. On the Influence of In-Plane Damages on the Out-of-Plane Behavior of Unreinforced Masonry Structures. Proceedings of the 10th National Conference in Earthquake Engineering, Earthquake Engineering Research Institute, Anchorage, AK, 2014.

- 6- Nikoukalam, Mohammad T., and **Kiarash M. Dolatshahi**. "Finite Element Investigation of Moment Resisting Frames with a New Shear Structural Fuse" Proceedings of the Second European Conference on Earthquake Engineering and Seismology (2ECEES), Istanbul, Turkey, 2014
- 7- **Dolatshahi, Kiarash M.**, Aref A., and Yekrangnia M. "A Study of Multi-Directional Response of Unreinforced Masonry Walls" Proceedings of the Second European Conference on Earthquake Engineering and Seismology (2ECEES), Istanbul, Turkey, 2014
- 8- Rezazadeh Pouya, **Kiarash M. Dolatshahi**, Mohammad Taghi Nikoukalam "Finite element investigation of two new structural fuses in moment resisting frames", Engineering Mechanics Conference (EMI), June 16-19, Stanford University, USA, 2015
- 9- Lotfi, Alireza, **Kiarash M. Dolatshahi**, Mohammad H. Haeri and Aliakbar Golafshani. "A new approach for structural health monitoring of offshore jacket platforms" Engineering Mechanics Conference (EMI), June 16-19, Stanford University, USA, 2015
- 10- Mahmoudi Farid, **Kiarash .M. Dolatshahi**, Mojtaba Mahsuli, Amir Shahmohammadi, Mohammad T. Nikoukalam "Experimental Evaluation of Steel Moment Resisting Frames with a Nonlinear Shear Fuse" Geotechnical & Structural Engineering Congress, Phoenix, Arizona, USA, Feb 14-17, 2016
- 11- **Kiarash M. Dolatshahi** , Amir Vafaie, Kamyar Kildashti, Mohamad J. Hamidia "Seismic Assessment of Uplift Allowed Soil–structure Systems with Deteriorating Behavior", 16WCEE, Chile, January 9-13, 2017
- 12- Bastian Wilding, **Kiarash M. Dolatshahi**, Katrin Beyer, "Influence of the loading history on the in-plane force-displacement response of URM walls" Canadian masonry symposium halifax , Canada, June 4th-7th 2017

Teaching

Undergraduate

Structural Analysis I

(Fall 2012, Spring 2014, Spring 2015, Spring 2017)

Structural Analysis II

(Spring 2013, Fall 2013, Fall 2014, Fall 2015, Spring 2016)

Design of Reinforced Concrete Structures I

(Fall 2013, Fall 2014, Fall 2017)

Design of Reinforced Concrete Structures II

(Spring 2018)

Concrete Project

(Fall 2014)

Graduate

Advanced Engineering Mathematics

(Spring 2013, Fall 2013, Fall 2015, Fall 2017)

Dynamics of Structures

(Fall 2014)

Nonlinear Modeling of Structures and Materials
(Spring 2014, Spring 2015, Spring 2016, EPFL Fall 2016, Spring 2017, Spring 2018)

Graduate students

Mohammad Hasan Haeri	PhD, 2017
Amir Vafaie	PhD, current
Farid Mahmudi (Co-PI: Dr. Mahsuli)	MS, 2015
Soheil Sadeghi (Co-PI: Dr. Mofid)	MS, 2015
Mohammad Dezfoli (Co-PI: Dr. Mofid)	MS, 2015
Farzad Hagghi (Co-PI: Dr. Mofid)	MS, 2015
Omid Moammer	MS, 2016
Mohammad Moeini (Co-PI: Dr. Khosravi)	MS, 2016
Ali Gharavi	MS, 2016
Reza Zamani	MS, 2016
Behroz Mahmudi (Tehran University, Co-PI Dr. Mirghaderi)	MS, 2016
Amir Vafaie	MS, 2017
Ashkan Bagheri	MS, 2017
Pouya Rezazadeh	MS, 2017
Amir Rezaie (Tehran University, Co-PI: Dr. Rafiee)	MS, 2017
Samyar Sarraf	MS, 2017
Sadyar Sarraf	MS, 2017
Shayan Khalooie	MS, current
Mirmahdi Mirrezaie	MS, current
Hamed Momeni	MS, current
Hamid Madani	MS, current