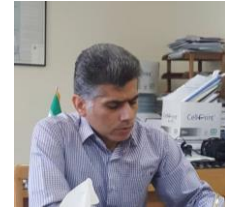


Curriculum Vita

Afshin Kalantari

*Associate Professor, Structural Engineering Research Center,
International Institute of Earthquake Engineering and Seismology (IIEES), Iran*



Academic Degree

- **PhD:** Kyoto University, Kyoto, Japan, 2005,
Title of Dissertation: Artificially Generated Nonlinear Structural System by Smart Seismic Isolation Using Variable Dampers
- **MSc:** Tarbiat Modares University, Tehran, Iran, 1999,
Title of Thesis: Development of Dynamic Lumped Mass Model for Elevated Liquid Storage Tanks
- **Bs.:** Yazd University, Yazd, Iran, 1996

Professional Training

- Professional course on "**Evaluation and rehabilitation of Premature Deterioration of Concrete Structures**", General Building Research Center (GBRC), Osaka, Japan, 2000, Organizer: Japan International Cooperation Agency (JICA).

Contact

- **Email:** a.kalantari@iiees.ac.ir
- **Address:** IIEES, No 24, Arghavan St., North Dibaji, Farmaniyeh, Tehran, Iran,
- **Voice:** (9821)-2283-0830
- **Fax:** (9821)-2283-0830
- **Personal Website:** <http://www.iiees.ac.ir/en/afshin-kalantari/>

Main Engineering Career:

- Civil /engineering Expert, Iran Management and Planning Organization, (1997~2000)
- Structural Design, Industrial and Residential structures, (1997~Up to now)
- Development of Criteria for Seismic Design of Base Isolated Buildings, (2006~2013)
- Structural Design of Highway Bridges (2009~2013)
- Research and Teaching assistant in Kyoto University, Japan, (2004~2005)

Appointments and Teaching Experience

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|--|---|
| ▪ Head of "Structural Engineering Research Center" of IIEES (2015-2018). | ▪ Lecturer, Seismic Design of Special Structures, IIEES. |
| ▪ Director of "Special Structures Group", "Structural Engineering Research Center of IIEES (2009-2019). | ▪ Director of Short Course on Seismic Risk of Highway Bridges, Assessment and Reduction Methods, IIEES. |
| ▪ Coordinator and Secretary, the Sixth International Conference on Seismology and Earthquake Engineering (SEE6), Tehran, Iran, 2011. | ▪ Director of Short Course on Structural Dynamics, IIEES. |
| ▪ Lecturer, Seismic Risk Analysis of Structures IIEES. | ▪ Director of Short Course on Seismic Isolation of Structures, IIEES. |
| ▪ Lecturer, Dynamics of Structures, IIEES. | ▪ Supervising dissertation of several PhD and master students on earthquake engineering, IIEES. |
| ▪ Lecturer, Seismic Control of Structures, IIEES. | |

Curriculum Vita

Afshin Kalantari

*Assistant Professor, Structural Engineering Research Center,
International Institute of Earthquake Engineering and Seismology (IIEES)*

- Teaching assistant, Structural Analysis, Kyoto University, 2004-2005.

Grants and Externally founded Programs

Current:

- Project Manager: Development of “**Guidelines for Design of Seismically Isolated Bridges**”, Planning and Budget Organization.
- “**Development of Plastic Hinge Models of RC Bridge Columns under Corrosion**”, Iranian National Science Foundation. Grant for Support of the supervised PhD Dissertation.
- Project Manager: Development of “**Guidelines for Risk Analysis of Civil Facilities under Natural Hazards**”, Planning and Budget Organization.
- “**Seismic Risk Assessment and Design Base Reliability of Iranian Code-Conforming RC Buildings**”, Iranian National Science Foundation.
- Project Manager: Development of “**Guidelines for Repair of Damaged Buildings after Earthquakes**”, Plan and Budget Organization, Planning and Budget Organization.

Accomplished:

- Project Manager: “**Development of Seismic Fragility Functions for Low and Mid-rise Moment Resisting and Shear Wall RC Structures Considering Consecutive Earthquakes**”, Iranian National Science Foundation, 2020.
- Team member: Development of “**Guidelines for Tsunami Hazard Assessment and Building Design in Iran-Makran Area**”, Planning and Budget Organization, 2021.
- Project Manager: Development of 2nd Edition of “**Guidelines for Design of Seismic Isolators for Buildings**”, PBO NO. 523, 2020.
- Team member: Development of “**Guidelines for Rapid Post-Earthquake Assessment of Buildings**”, Plan and Budget Organization, 2020.
- Team member: Development of “**Guidelines for Safe Hospital Planning and Design**”, United Nation, UNHABITAT Office, 2019.
- Team member: Development of “**Guidelines for Seismic Design and Assessment of Laboratories in MSRT Facilities**”, 2019.
- Project Manager: Development of a “**Development of the Second Edition of Commentary for the Seismic Rehabilitation of Existing Buildings**”, Plan and Budget Organization Publication No. 361, 2018.
- Team member: Development of “**Guidelines for Seismic Design of Sewage Systems for Tehran**”, 2015.
- Team member: “**Seismic Financial Loss off 2012 Ahar-Varzaghan Earthquake**”, for Central Insurance Company, 2014.
- Project Manager: Development of a “**Guidelines for Design of Seismic Isolators for Buildings**”, Plan and Budget Organization Publication No. 523, 2010.
- Project Manager: Development of a “**National plan and documents for development of seismic codes in Iran**”, A Project defined by Management and Planning Organization of Iran, 2009~2012.
- Technical Advisor “**Animation on Public Awareness on Construction of Safe Buildings for Earthquakes**”, UNDP, Iran, 2008.

IIEES Research

Current research

- Base Isolation and Seismic Control of Structures
- Risk Targeted Structural Design Criteria
- Corrosion Effects on Seismic Performance of RC Structures.
- Aftershock Effects on Seismic Resiliency of Buildings And Transportation Systems
- Bidirectional Loading Effects on Seismic Capacity of RC Columns
- Life Cycle Cost of Essential Buildings and Infrastructure Equipped by Seismic Energy Dissipative Devices, A Comparative Study.

Accomplished Projects in IIEES

Reconnaissance:

- Reconnaissance of 2017 Sar pol'e Zahab-Kermanshah Earthquake, IIEES, 2017.
- A Member of Reconnaissance Team, 2014 Mormori-Ilam Earthquake, IIEES, 2014.
- A Member of Reconnaissance Team, 2012 Ahar-Varzaghan Earthquake, IIEES, 2012.
- A Member of Reconnaissance Team, 2009 Indonesia Earthquake, IIEES, 2009.
- A Member of 2003 Bam Earthquake Post Disaster Research Team, Kyoto University, 2004.
- Reconnaissance Team, 2003 Bam Earthquake, Kyoto University, 2003.

Research

- Kalantari A., Igarashi A., Iemura H., "Artificially Generated Nonlinear Structural System by Smart Seismic Isolation Using Variable Dampers", Kyoto University, Structural Dynamics Laboratory, June 2005.
- "Application of Innovative Control Methods on Reduction of Seismic Response of Equipment", 2005.
- Afshin Kalantari, "Application of Innovative Control Methods for Reduction of Seismic Response of Equipment", Research Report, International Institute of Earthquake Engineering and Seismology, 2006
- "A Study on Seismic Vulnerability of Base Isolated Rigid Block Type Equipment Due to Rocking By Means of Fragility Curves", 2006.
- Afshin Kalantari, "Evaluation of Seismic Vulnerability of Seismically Isolated Rigid Block Equipment in Buildings Using Fragility Curves", Research Report, International Institute of Earthquake Engineering and Seismology, 2007.
- "A study on nonlinear behavior of piers in skewed bridges during earthquakes", 2008.
- "Development of Seismic Fragility Curves for Quick Seismic Assessment of Typical Three Span Highway Bridges in Tehran", 2008.
- "Application of Angular-mass Dampers to Base-isolated Rigid Block Equipment", 2009.
- "A Study on Seimi-active Control of Skewed Bridges Using OpenSees Software", 2009.
- Afshin Kalantari, "Nonlinear Behavior of Skewed Highway Bridges", Research Report, International Institute of Earthquake Engineering and Seismology, 2009.
- Afshin Kalantari, "Development of Seismic Fragility Curves for Typical Highway Bridges in Iran", Research Report, International Institute of Earthquake Engineering and Seismology, 2010.

- Afshin Kalantari, M. Amjadian, "A Numerical Study on Semi-Active Control of Skewed Highway Bridges Using OPENSEES", Research Report, International Institute of Earthquake Engineering and Seismology, 2011
- "A Comparative Study on Seismic Demand of External Shear Keys in Normal and Skewed Reinforced Concrete Highway Bridges", 2012
- "Development of Non-linear Static Analysis in Skewed Bridges Considering Simultaneous Effect of Torsion and Flexure", 2015.
- "Experimental and numerical investigation of using lead extrusion dampers in building having rocking motion in Earthquake", 2017.
- "Development of Seismic Velocity Spectra Based on Strong Motion Record Database of Iran for Special and Buried Structures", 2017.
- "Seismic Response of Highway Bridges with Rubber-Friction Isolators under Near-Field Ground Motion", 2018.

Papers and Reports

- Amir Reza Taherian, Afshin Kalantari, "Analysis of the risk-targeting approach to defining ground motion for seismic design: a case study of Iran", Bulletin of Earthquake Engineering, 2021.
- Siavash Sadeghi, Afshin Kalantari, Esmaeel Izadi Zaman Abadi, "Effect of Construction Deficiencies on Seismic Performance of Hospitals during the 2017 Sarpol-e Zahab Earthquake, Journal of Performance of Constructed Facilities", 2020.
- A Kalantari, D Abdi, BA Feshki, "Seismic fragility assessment of equipment and support structure in a unit of a petrochemical plant", SN Applied Sciences 2 (8), 1-8, 2020.
- A Kalantari, H Roohbakhsh, AR Taherian, "Seismic fragility assessment of RC moment resisting frame buildings designed for different editions of Iranian seismic design code", (in Persian), Disaster Prevention and Management Knowledge (quarterly) 10 (1), 58-49, 2020.
- A. Kalantari, H. Roohbakhsh, "Expected seismic fragility of code-conforming RC moment resisting frames under twin seismic events", Journal of Building Engineering, 2020.
- A. Taherian, A. Kalantari, "Risk-targeted seismic design maps for Iran", Journal of Seismology, 2019.
- S. A. Moayyedi, A. Kalantari, "Computing the Effects of Vertical Ground Motion Component on Performance Indices of Bridge Sliding-Rubber Bearings", Iranian Journal of Science and Technology - Transactions of Civil Engineering, 2019.
- Mehdi Asadpour, Afshin Kalantari, Armin Aziminejad, Masoud Nekooei, "Adjustment of Pole Placement Algorithm Based on Vulnerability Reduction of Skewed Bridges", Iranian Journal of Science and Technology, Transactions of Civil Engineering, 2019.
- A. Kalantari, R. ShafiePanah, "Experimental and Numerical Study of a Seismic Rotating Mass Damper (RMD) in an Isolated Floor", KSCE Journal of Civil Engineering, 1-8
- A Kalantari, MR Nikoomeh, MA Goudarzi, "Applicability of Mass-Spring Models for Seismically Isolated Liquid Storage Tanks", Journal of Earthquake and Tsunami, 2018.
- N. Attarchian, A. Kalantari and A. S. Moghadam, "Developing a new procedure for evaluating the ductility capacity of rectangular RC piers subjected to biaxial flexural loadings", Engineering Structures, 2018.

- M. Asadpour, A. Kalantari, "A study on effective parameters on seismic behavior of skewed bridges", Sharif Journal, 2018.
- A. Kalantari, "A research on Seismic Vulnerability of Structures on Flat Sliding Isolators Affected by Seismic Sequences", The International Conference on Recent Progresses in Civil Engineering, 15-16 November 2017-Shomal University.
- A. Kalantari, "Seismic Response Reduction in Liquid Storage Tanks by Simple Smart Base Isolation Systems", Iranian Journal of Science and Technology, Transactions of Civil Engineering 41(2) · December 2016, DOI: 10.1007/s40996-017-0048-1
- Mohsen Amjadian, Afshin Kalantari, Anil K Agrawal, Analytical study of the coupled motions of decks in skew bridges with the deck–abutment collision, Journal of Vibration and Control, Jul 2016.
- Afshin Kalantari, Nahid Attarcian, Abdoreza Sarvghad Moghadam, "Seismic performance of single pier skewed bridges with different pier-deck connections", Earthquakes and Structures, Jun 2016.
- A. Riahi Nouri, I. Anastasopoulos, M.G. Vetr, A. Kalantari, Efficiency of low-rise steel rocking frames founded on conventional and rocking foundations, May 2016.
- Mohammad G. Vetr, Abolfazl Riahi Nouri, Afshin Kalantari, "Seismic evaluation of rocking structures through performance assessment and fragility analysis", Earthquake Engineering and Engineering Vibration, Mar 2016.
- Mehdi Daneshi, Afshin Kalantari, "Effect of a Base Isolation System for Reduction of Annual Seismic Risk of a Steel Building", Sep 2015.
- Afshin Kalantari, Seyyed Amir Hossein Moayyedi, "Seismic Performance of Isolated Highway Bridge by Sliding and Rubber Isolators under Near Field Ground Motions", (In Persian), Bulletin of Earthquake Science and Engineering, Jun 2015.
- N. Attarchian, A. Kalantari, A.S. Moghadam; "Cyclic behavior modeling of rectangular RC bridge piers using OpenSees" Proceedings of the 4th International Conference on Computational Methods In Structural Dynamics and Earthquake Engineering, Kos Island, Greece, 12-14 June 2013.
- N. Attarchian, A. Kalantari, A.S. Moghadam; "Seismic assessment of monolithic vs. pin column top connections in R/C skewed bridges" Proceedings of the 6th International Conference on Bridge Maintenance, Safety and Management, Resilience and Sustainability, Stresa, Lake Maggiore, Italy, 8-12 July 2012, Taylor & Francis Group, ISBN 978-0-415-62124-3.
- A. Kalantari, "A Reconnaissance Report of August 11th 2012, North-West Iran Earthquake", Bulletin of Seismology and Earthquake Engineering, IIEES.
- A. Kalantari, M. Amooi, "Corrosion caused by chloride ions' Influence on residual flexural capacity of RC members according to modified Equation of bond degradation", Sharif Journal of Civil Engineering.
- A. Kalantari, N. Lotfi Kamran, "Effect of Vertical Motion on Seismic Performance of RC Highway Bridges", Bulletin of Seismology and Earthquake Engineering, IIEES, 2013.
- Kalantari A., Ahmadi M. T., "Dynamic Modelling of Elevated Liquid Storage Tanks", Modarres Journal, 1999, (in Persian).

Books

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- **Seismic Risk of Structures and the Economic Issues of Earthquakes** ,A book chapter in: **Earthquake Engineering**, Edited by Halil Sezen ,ISBN 978-953-51-0694-4, Hard cover, 336 pages, Publisher: InTech, Published: August 08, 2012.
 - **Seismic Risk Management of Structures**, IIEES, Masaro Hoshya, Takaaki Nakamura, (A Translation from a Book with the same name From Japanese to Persian).

Academic Honors and Awards

- Scholarship for A short course on “Premature Deterioration of Concrete Structures”, By Japan International Cooperation Agency.
- Japan Monbukagakusho Scholarship for PhD Course in Kyoto University, Japan.

Patents

- Iran national Patent for an "External Friction Shear Key Device" (Under official process).

Languages

- Persian (Mother tongue), English (Fluent), Japanese, and Turkish