

Seyyed Ali Mousavi Gavgani

Ph.D. Candidate

Department of Civil Engineering, Faculty of Engineering, Kharazmi University, Tehran, Iran

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[Website](#) | [Google Scholar](#) | [ResearchGate](#) | [Academia](#) | [Linkedin](#) | [Orcid](#) | [Scopus](#)

EDUCATION

Ph.D. Structural Engineering, [Kharazmi University, Iran](#) 09/2021- Present

- Thesis: Semi-Active Control of Offshore Platforms Using Inertial-Based Dampers
- Supervisor: Prof. Seyed Hossein Hosseini Lavassani (Iran)
- Advisor: Prof. Gebrail Bekdaş (Turkey)
- Cumulative GPA: 18.79 / 20.00 | Cumulative GPA in scale of 4.00: 4.00

M.S. Structural Engineering, [University of Maragheh, Iran](#) 10/2017-02/2020

- Thesis: Optimum Control of High Rise Buildings with Magneto-Rheological Damper under Near-Fault and Far-Fault Earthquake Motions Using Particle Swarm Optimization Algorithm
- Supervisors: Prof. Maziar Fahimi Farzam (Iran), Prof. Babak Alinejad (Iran)
- Advisor: Prof. Gebrail Bekdaş (Turkey)
- Cumulative GPA: 18.56 / 20.00 | Cumulative GPA in scale of 4.00: 4.00

B.E. Civil Engineering, [University of Maragheh, Iran](#) 10/2013-09/2017

- Cumulative GPA: 15.52 / 20.00
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RESEARCH INTERESTS

- (1) Structural Control (with Passive, Active and Semi-Active methods)
 - (2) Structural Health Monitoring
 - (3) Offshore Structures Vibrations
 - (4) Inertial-Based Dampers
 - (5) Soil-Structure Interaction (SSI)
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HONORS AND AWARDS

- (1) Achieving elite by Iran's National Elites Foundation (INEF), 2023.
 - (2) Achieving elite by Iran's National Elites Foundation (INEF), 2022.
 - (3) Study for Ph.D. degree with exceptional talents program, 2021.
 - (4) Achieving elite by Iran's National Elites Foundation (INEF), 2020.
 - (5) Graduation by obtaining the "First" rank of incoming students with a grade point average of "A" and defending the thesis with an "Excellent" grade, 2020.
 - (6) Winner of the grand scientific prize "Poulad" and being among the top researchers in the universities of East Azerbaijan province, 2020.
 - (7) Top researcher in master's degree, 2019.
 - (8) Top researcher of the engineering faculty, 2019.
 - (9) Top paper of the conference "*The first National Conference on Civil Engineering Role Reduction*" in the field of structural and earthquake engineering, 2019.
 - (10) Study for master's degree with exceptional talents program, 2017.
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PUBLICATIONS**Journal Articles (Published)**

1. **S. A. Mousavi Gavgani**, S. H. Hosseini Lavassani, Vibration mitigation of offshore structures subjected to wave and wind loads using optimum semi-active tuned mass damper inerter (SATMDI), *Ocean Engineering*, 2024.
2. S. H. Hosseini Lavassani, **S. A. Mousavi Gavgani**, R. Doroudi, Optimal control of jacket platforms vibrations under the simultaneous effect of waves and earthquakes considering fluid-structure interaction, *Ocean Engineering*, 2023.
3. R. Drabanian, **S. A. Mousavi Gavgani**, V. Kalatjari, Robust control of structures with active tendon and Fuzzy-LQR algorithm considering uncertainties of structural parameters, *Journal of Vibration Engineering & Technologies*, 2023.
4. H. Hojat Jalali, M. Fahimi Farzam, **S. A. Mousavi Gavgani**, G. Bekdas, Semi-Active Control of Buildings using Different Control Algorithms Considering SSI, *Building Engineering*, 2023.
5. **S. A. Mousavi Gavgani**, A. Ahmadnejad Zarnaghi, S. Heydari, Structural damage detection from dynamic responses of the bridge deck under a moving load using discrete wavelet transform, *Advances in Bridge Engineering*, 2022.
6. **S. A. Mousavi Gavgani**, H. Hojat Jalali, M. Fahimi Farzam, Semi-Active Control of Jacket Platforms under Wave Loads Considering Fluid-Structure Interaction, *Applied Ocean Research*, 2021.
7. R. Drabanian, **S. A. Mousavi Gavgani**, V. Kalatjari, Online determination of LQR controller weight matrices using fuzzy supervisor under artificial earthquake records, *Bulletin of Earthquake Science and Engineering (BESE)*, 2021. (In Persian)

8. M. Fahimi Farzam, **S. A. Mousavi Gavvani**, B. Alinejad, G. Bekdas, Optimal control of jacket platform under wave vibration with Active Tuned Mass Damper, *Sharif Journal of Civil Engineering*, 2020. (In Persian)
9. M. Fahimi Farzam, **S. A. Mousavi Gavvani**, B. Alinejad, Statistical Performance of Semi-Active Controlled 10-Storey linear Building using MR Damper under Earthquake Motions, *Amirkabir Journal of Civil Engineering*, 2020. (In Persian)
10. M. Fahimi Farzam, **S. A. Mousavi Gavvani**, B. Alinejad, Seismic Control of a 10-Storey Shear Frame Using Active Tuned Mass Dampers and Particle Swarm Optimization Algorithm, *Amirkabir Journal of Civil Engineering*, 2019. (In Persian)

Conference Articles (Oral)

1. **S. A. Mousavi Gavvani**, A. Massumi, Semi-active vibration control of industrial chimneys using magneto-rheological dampers under near and far fault ground motions, 13th National Congress on Civil Engineering, Isfahan University of Technology, Isfahan, Iran, 05/2022. (In Persian)
2. M. Fahimi Farzam, B. Alinejad, G. Bekdaş, **S. A. Mousavi Gavvani**, Control of a jacket platform under wave load using ATMD and optimization by HSA, *6th International Conference on Harmony Search, Soft Computing and Applications (ICHSA 2020)*, Istanbul University, Istanbul, Turkey, 07/2020.
3. M. Fahimi Farzam, **S. A. Mousavi Gavvani**, M. A. Yousefi, Semi Active Control of Karun 4 Cable Bridge with Magneto-Rheological damper Under Benchmark Records, *5th International Conference on Bridges (5IBC2019)*, Amirkabir University of Technology, Tehran, Iran, 12/2019. (In Persian)
4. M. Fahimi Farzam, B. Alinejad, **S. A. Mousavi Gavvani**, Seismic control of tall buildings using tuned mass damper considering soil-structure interaction, *3rd International Conference on Applied Researches in Structural Engineering and Construction Management (secm2019)*, Sharif University of Technology, Tehran, Iran, 07/2019. (In Persian)
5. M. Fahimi Farzam, **S. A. Mousavi Gavvani**, T. Dehghan Kalajahi, Seismic performance of structures equipped with viscous damper under near-fault and far-fault Earthquakes, *3rd International Conference on Applied Researches in Structural Engineering and Construction Management (secm2019)*, Sharif University of Technology, Tehran, Iran, 07/2019. (In Persian)
6. M. Fahimi Farzam, B. Alinejad, M. Rezaei Carin, **S. A. Mousavi Gavvani**, Seismic performance evaluation of viscoelastic dampers in steel structures under near and far field earthquakes, *3rd International Conference on Applied Researches in Structural Engineering and Construction Management (secm2019)*, Sharif University of Technology, Tehran, Iran, 07/2019. (In Persian)
7. B. Alinejad, M. Fahimi Farzam, H. Hamed Maralani, **S. A. Mousavi Gavvani**, Active control of tall structures using active tendon and linear quadratic regulator control algorithm, *The first National Conference on Civil Engineering Role Reduction*, Razi University, Kermanshah, Iran, 01/2019. (In Persian)

Conference Articles (Poster)

1. M. Fahimi Farzam, B. Alinejad, **S. A. Mousavi Gavvani**, Performance comparison of fuzzy and linear quadratic regulator controls in active tuned mass damper, *6th National Congress on Civil Engineering , Architecture and Urban Development*, Iran University of Science and Technology, Tehran, Iran, 03/2019. (In Persian)
2. B. Alinejad, M. Fahimi Farzam, H. Hamed Maralani, **S. A. Mousavi Gavvani**, Performance comparison of active tendon controlled structures considering tendons placement, *6th National*

Congress on Civil Engineering , Architecture and Urban Development, Iran University of Science and Technology, Tehran, Iran, 03/2019. (In Persian)

3. M. Fahimi Farzam, B. Alinejad, **S. A. Mousavi Gavgani**, Comparison of active control performance of high-rise structures under different types of near and far field earthquakes, *The first National Conference on Civil Engineering Role Reduction*, Razi University, Kermanshah, Iran, 01/2019. (In Persian)
4. M. Fahimi Farzam, B. Alinejad, **S. A. Mousavi Gavgani**, Active control of high-rise structures using linear quadratic regulator algorithm and tuned mass damper, *International Conference on Civil Engineering, Architecture and Urban Development Management*, University of Tehran, Tehran, Iran, 12/2018. (In Persian)
5. B. Alinejad, M. Fahimi Farzam, H. Hamed Maralani, **S. A. Mousavi Gavgani**, Seismic performance analysis of active tendon controlled structures by linear quadratic regulator algorithm, *International Conference on Civil Engineering, Architecture and Urban Development Management*, University of Tehran, Tehran, Iran, 12/2018. (In Persian)

Book Chapter

1. M. Fahimi Farzam, H. Hojat Jalali, **S. A. Mousavi Gavgani**, A. E. Kayabekir, G. Bekdaş, "Current Trends in the Optimization Approaches for Optimal Structural Control", In: *Advances in Structural Engineering—Optimization*, Springer Cham, 12/2020. ISBN: 9783030618483

Book Translate

1. M. Fahimi Farzam, **S. A. Mousavi Gavgani**, H. Kazemi Sormoli, "Active structural control (theory and practice)", University of Maragheh Publisher, 07/2019. (To Persian) ISBN: 9786226321129
 2. S. H. Hosseini Lavassani, **S. A. Mousavi Gavgani**, H. Hamed Maralani, "Technology of Semiactive Devices and Applications in Vibration Mitigation", Kharazmi University Publisher. (To Persian)
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ASSISTANT EXPERIENCES

Teaching Assistant:

University of Maragheh 09/2018-02/2020

- Dynamics of Structures.
- Control of Structures.

Kharazmi University 01/2023-06/2023

- Control of Structures.

Research Assistant:

Assistant to Professor Maziar Fahimi Farzam. 03/2018-02/2020

Assistant to Professor Seyed Hossein Hosseini Lavassani. 09/2022- Present

Technical Assistant:

Assistant to Professor Seyed Hossein Hosseini Lavassani. 01/2023- Present

PROFESSIONAL MEMBERSHIP AND SERVICE

- Reviewer: Structures (ISSN: 2352-0124); Periodica Polytechnica Civil Engineering (ISSN: 1587-3773).
 - Civil engineer in Tabriz construction engineering organization.
 - Manager of simulation and control department in NPS company.
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REFERENCES

- **Dr. Seyyed Hossein Hosseini Lavassani**

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