Curriculum Vitae

Personal Data

Surname: Karami
First name: Kaveh
Date of birth: August 22, 1983
Nationality: Iranian

Google Scholar, ResearchGate,
Linkedin, Orcid, Publons-Web of Science, Scopus

210 at Department of Civil Engineering, University of Kurdistan,
Pasdaran St., Sanandaj, Iran.
P.O.Box: 66177-15175
Fax: +98-87-33668513
Email: ka.karami@uok.ac.ir
Website: https://prof.uok.ac.ir/ka.karami/

Dr. Kaveh Karami
Associate Professor of Structural Engineering at Department of Civil Engineering, University of Kurdistan.

Last Update: 14 February 2024

Educational Background

2008-2013	PhD in Civil Engineering-Structure	Iran University of Science and Technology (IUST), Tehran, Iran
2006-2008	MSc in Civil Engineering-Structure	Iran University of Science and Technology (IUST), Tehran, Iran
2001-2005	BSc in Civil Engineering	University of Kurdistan (UOK), Sanandaj, Iran

Ph. D. Dissertation Title:
Smart Structural Control of Damaged Structures by Structural Health Monitoring
Supervisor: Prof. Fereidoun Amini
E-mail: famini@iust.ac.ir

M. Sc. Dissertation Title:
Semi-Active Optimal Control of High Rise Building Based on Capacity Demand Theory
Supervisor: Prof. Fereidoun Amini
E-mail: famini@iust.ac.ir

Research Interests

- Structural Vibration Control.
  - Passive, Active, Semi-Active and Hybrid Control.
  - Negative Stiffness, Adaptive Stiffness.
  - TMD, MR, Viscous and Friction Dampers.
  - Base Isolation.
  - Coupled Structures.
  - Addaptive Control.
- Structural Health monitoring.
  - Damage Detection.
  - System Identification.
  - Addaptive Identification.
  - Computer Vision.
  - Blind Identification.
  - Machine Learning and Deep Learning.
- Smart Structures and Systems.

Journal papers:

2023 [3]

[15] Azizi, S., **Karami, K.** and Mariani, S. (2023), "Full-field modal analysis using video measurements and a blind source separation methodology.", *Engineering Proceedings*, 58(1), 105.

[14] Azizi, S., **Karami, K.** and Mariani, S. (2023), "Structural identification by means of a digital image correlation technology.", *Engineering Proceedings*, 58(1), 65.

[13] Azizi, S., **Karami, K.** and Mariani, S. (2023), "Vision-based structural identification using an enhanced phase-based method.", *Engineering Proceedings*, 58(1), 62.

2021 [2]

[12] **Karami, K.**, and Ahmadi, H. (2021), "Torsional control of asymmetric buildings using online 3-D damage detection and adaptive stiffness devices", *Structural Control and Health Monitoring*, 28(10), e2804.

[11] Azizi, S., **Karami, K.**, and Nagarajaiah, S. (2021), "Developing a semi-active adjustable stiffness device using integrated damage tracking and adaptive stiffness mechanism", *Engineering Structures*, 238, 112036.

2020 [3]

[10] **Karami, K.**, Fatehi, P. and Hoseini, A. (2020), "Subspace based identification of structural parameters of the base isolation level", *Amirkabir Journal of Civil Engineering*, 53(12), 1-3. 10.22060/ceej.2020.18784.6961.

[9] Sourni, S., Batmani, Y. and **Karami, K.** (2020), "Seismic motion control of structures using an adaptive optimal model-free controller", *Journal of Vibration and Control*, 27(19-20), 2368-84.

[8] **Karami, K.**, Fatehi, P. and Yazdani, A. (2020), "On-line system identification of structures using wavelet-Hilbert transform and sparse component analysis", *Computer-Aided Civil and Infrastructure Engineering*, 10.1111/mice.12552.

2019 [2]

[7] Manie, S., **Karami, K.** and Fatehi, P. (2019), "Online system identification in smart structures using wavelet transform based sparse component analysis", *Amirkabir Journal of Civil Engineering*, 52(9), 1-3. 10.22060/ceej.2019.16145.6140.

[6] **Karami, K.**, Manie, S.,Ghafouri, Kh. and Nagarajaiah, S. (2019), "Nonlinear structural control using integrated DDA/ISMP and semi-active tuned mass damper", *Engineering Structures*, 181C, 589-604.

2016 [2]

[5] **Karami, K.**, Nagarajaiah, S. and Amini, F. (2016), "Developing a smart structure using integrated DDA/ISMP and semi-active variable stiffness device", *Smart Structures and Systems*, 18(5), 955-982.

[4] **Karami, K.** and AkbarAbadi, Sh. (2016), "Developing a smart structure using integrated subspace-based damage detection and semi-active control", *Computer-Aided Civil and Infrastructure Engineering*, 31(11), 887-903.

2012 [2]

[3] **Karami, K.** and Amini, F. (2012), "Decreasing the damage in smart structures using integrated online DDA/ISMP and semi-active control", *Smart Materials and Structures*, 21, 105017.

[2] Amini, F. and **Karami, K.** (2012), "Damage detection algorithm based on identified system Markov parameters (DDA/ISMP) in building structures with limited sensors", *Smart Materials and Structures*, 21, 055010.

2011 [1]

[1] Amini,F. and **Karami, K.** (2011), "Capacity design by developed pole placement structural control", *Structural Engineering and Mechanics*, 39(1),147-168.

Conference papers:

2023 [1]

[19] **Karami, K.**, Amiri, K. and Fatehi, P. (2023), "Identification of structural systems using the development of the single source point method in the sparse component analysis.", *13th International Congress on Civil Engineering, Tehran.* P8.(In Persian).

2022 [1]

[18] Azizi, S. and **Karami, K.** (2022), "Vision based modal Identification of structures using phase extraction and linearization", *13th National Congress on Civil Engineering, Isfahan.* P7.(In Persian).

2021 [2]

[17] Fatehi, P., **Karami, K.** and Zandsalimi, K. (2021), "3D Identification of torsional modes of structural systems using sparse component analysis based on the Hilbert-Wavelet transform", *12th International Congress on Civil Engineering, Mashhad.* P9.(In Persian).

[16] Azizi, S., **Karami, K.** and Zandsalimi, K. (2021), "Blind modal Identification of vibrating structures by imaging using the extracted phase", *12th International Congress on Civil Engineering, Mashhad.* P9.(In Persian).

2020 [2]

[15] Naderi, S., **Karami, K.** and Batmani, Y. (2020), "Real time damage detection in building structures using model-based adaptive control approach", *12th National Congress on Civil Engineering, Tabriz.* P9.(In Persian).

[14] **Karami, K.** and Karimi, F. (2020), "System identification of the non-classical damping structures using sparse component analysis", *12th National Congress on Civil Engineering, Tabriz.* P10.(In Persian).

2018 [4]

[13] **Karami, K.** and Shafiee, A. (2018), "Determining mid-story isolation parameters in control of structures", *11th International Congress on Civil Engineering, Tehran.* P8.(In Persian).

[12] **Karami, K.**, Yazdani,A. and Fatehi, P. (2018), "Structural identification using sparse components analysis and Hilbert transform to reduce existing disturbances", *11th International Congress on Civil Engineering, Tehran.* P8.(In Persian).

[11] **Karami, K.** and Azizi, S. (2018), "Semi-active seismic control of damaged structures using a combination of health monitoring and negative stiffness device", *11th International Congress on Civil Engineering, Tehran.* P8.(In Persian).

[10] **Karami, K.** and Adabi, F. (2018), "Smart control of adjacent building structures using structural health monitoring", *11th International Congress on Civil Engineering, Tehran.* P8.(In Persian).

2016 [3]

[9] **Karami, K.** and Ahmadi, H. (2016), "Torsional control of tall buildings using integrated real time damage detection and semi-active variable stiffness device", *9th National Congress on Civil Engineering, Mashhad.* P10.(In Persian).

[8] Mohammadi- KaniSavaran, A., Yazdani, A. and **Karami. K.** (2016), "Estimation of the period and deflection amplification factor for steel structures using Bayesian approach", *9th National Congress on Civil Engineering, Mashhad.* P9.(In Persian).

[7] Manie, S., **Karami. K.** and Ghafouri, KH. (2016), "Damage control of smart structures using integrated real time damage detection and variable stiffness TMD", *9th National Congress on Civil Engineering, Mashhad.* P8.(In Persian).

2015 [2]

[6] Mohammadi- KaniSavaran, A., Yazdani, A. and **Karami. K.** (2015), "Updating deflection amplification factor for moment resisting steel frame structures using Bayesian approach", *3rd International Congress on Civil Engineering, Architecture & Urban development, Tehran*. P10.(In Persian).

[5] **Karami, K.** and AkbarAbadi, SH. (2015), "Decreasing the damage in smart isolated structures using integrated structural health monitoring and semi-active control", *4th National Conference on New Materials & Structures in Civil Engineering, Yasuj*. P10.(In Persian).

[4] **Karami, K.** and Ahmadi, H. (2015), "A new damage detection method based on Identified system Markov parameters in 3d structures", *4th National Conference on New Materials & Structures in Civil Engineering,Yasuj*. P10.(In Persian).

2009 [1]

[3] Amini, F. and **Karami, K.** (2009), "Optimal Placement of Semi-Active Control Devices Based on Capacity Diagram in Elastic Zone using Genetic algorithm", *the 8th International Congress on Civil Engineering, Shiraz.* 328-336.(In Persian).

2008 [2]

[2] **Karami, K.**, Holakoo, A., Mahmoodpour, A. and Zandsalimi, K. (2008), "Assessing influences of Openings in Diaphragm Rigidity", *the 14th National Conference of Civil engineering Students, Semnan.* 58-64.(In Persian).

[1] Mahmoodpour, A. and **Karami, K.** (2008), "Determining Lower Bound of Ultimate Load in Cracked Plate Using Decreasing Module of Elasticity", *the 14th National Conference of Civil engineering Students, Semnan.* 94-100.(In Persian).

Postgraduate Thesis Supervision:

PhD Students:

1- **Samira Azizi**, PhD Student, "*Structural assessment based on Blind Source Identification methods using images analysis*", 2021 to present.

MSc Students:

1- **Alireza Divanbagi**, MSc Student, *"Smart control of wind turbine based on combination of structural health monitoring and vibration control*", 2023 to present.
2- **HesamAldin Zabihi**, MSc Student, *"Damage detection in structures using reduced order system and model updating*", 2021 to present.
3- **Kaihan Amiri**, MSc Student, *"Development of single source points technique to identify higher order modes in structural systems*", 2021 to 2023.
4- **Samira Naderi**, M.S. Student, *"Real time damage detection in building structures using model-based adaptive control approach*", 2019 to 2021.
5- **Farzad Karimi**, M.S. Student, *"Developing blind modal identification for non-proportionally damped structures by time-frequency method*", 2019 to 2021.
6- **Pezhman Fatehi**, M.S. Student, "*Damage detection based on blind source identification*", 2016 to 2018.
7- **Asra Hoseini**, M.S. Student, "*Subspace based structural parameters identification of base isolation level* ", 2016 to 2018.
8- **Samira Azizi**, M.S. Student, "*Smart control of damaged structures using negative stiffness device* ", 2016 to 2018.
9- **Ashkan Shafiee** , M.S. Student, "*Determining mid-story isolation parameters in control of structures*", 2015 to 2017.
10- **Farzaneh Adabi**, M.S. Student, "*Smart control of adjacent building structures using structural health monitoring*", 2014 to 2017.
11- **Khatib Ghafouri**, M.S. Student, "*Damage control of smart structures using integrated real time damage detection and variable stiffness TMD* ", 2013 to 2016.
12- **Hasan Ahmadi**, M.S. Student, "*Torsional control of tall buildings using integrated real time damage detection and semi-active variable stiffness device*", 2013-2015.
13- **Shahnaz Akbarabadi**, M.S. Student, "*Damage Detection Algorithm Based on Subspace Method in Building Structures*", 2013-2015.

Teaching Experience

Undergraduate:

- Analysis of Structures I&II.
- Mechanics of Materials I&II.
- Statics.
- Dynamics.
- Fundamentals of Earthquake Engineering.
- Application of Computer in Civil Engineering.
- Steel and Concrete Building Design.

Graduate:

- Structural Dynamics Theory and Computation.
- Structural Vibration Control.
- Structural Health monitoring.
- Static Nonlinear Analysis of Structures.
- Dynamic Nonlinear Analysis of Structures.

Sabbatical

1. Karami, K., Nagarajaiah, S. and Amini, F., Decreasing damage due to strong earthquakes in smart structures using integrated online DDA/ISMP and semi-active variable stiffness device. Research project during Six months sabbatical period for collaboration on research related to damage detection and semi-active structural control at Rice University, Houston Texas, USA, from 15/March/2012 to 14/September/2012.

Activities:

Computer Skills

- MAPLE, MATHEMATICA, MATLAB and TABLE CURVE.
- VISUAL STUDIO.
- ETABS, SAFE, SAP, OPENSEES, PERFORM, SEISMO SIGNAL and SEISMO STRUCT.
- AUTOCAD and ARCHICAD.

Referee

I am referee of the

1. Structural Control and Health Monitoring
2. Engineering Structures
3. Journal of Vibration and Control
4. Journal of Sound and Vibration
5. Smart Structures and Systems, An International Journal
6. Structures
7. International Journal of Structural Stability and Dynamics
8. Earthquakes and Structures, An International Journal
9. Journal of Engineering Mechanics-ASCE
10. Scientific Reports
11. Nonlinear Dynamics
12. Civil Engineering Infrastructures Journal
13. Journal of Engineering Science & Technology
14. Amirkabir Journal of Civil Engineering
15. Journal of Iranian Society of Civil Engineering
16. International Journal of Advanced Structural Engineering
17. Journal of Civil and Environmental Engineering
18. Journal of Rehabilitation in Civil Engineering

Positions

a) Associate professor of structural engineering at department of civil engineering, university of Kurdistan, (2021 to now).
b) Member of the civil council at university of Kurdistan, (2021 to now).
c) Head of civil engineering department at university of Kurdistan, (2019 to 2022).
d) Scientific advisor to the society of civil engineering students, (2017 to 2018).
e) Scientific advisor to the society of civil engineering students, (2014 to 2015).

f) Assistant professor of structural engineering at department of civil engineering, university of Kurdistan, (2013 to 2021).
g) Member of the American Society of Civil Engineering (ASCE).
h) Member of the American Concrete Institute (ACI).

Awards

a) Distinguished Teacher of Civil Engineeing Department, University of Kurdistan, in 2021.
b) Admission Rank in MSc test: 103 (Among the 2468 participants) in 2006.
c) Second rank as a BSc graduate at University of Kurdistan in 2005.

Languages

- Kurdish (Native Language)
- Persian (Iranian Formal Language)
- English (Spoken, Written)

Contact Information:

Associate Prof. of Structural Engineering.
210 at Department of Civil Engineering, University of Kurdistan, Sanandaj, Iran.
P.O.Box: 66177-15175
Fax: +98-87-33668513
Email: ka.karami@uok.ac.ir & kkarami@alumni.iust.ac.ir
Website: https://prof.uok.ac.ir/ka.karami/ & https://research.uok.ac.ir/%7Ekavehkarami/en/