

# ALI GHASEMOF

Assistant Professor  
International Institute of Earthquake Engineering and Seismology (IIEES)  
Structural Engineering Research Center, Department of Special Structures  
No.21 Arghavan St., North Dibajee, Farmanieh, Tehran, Iran  
Tel: +98 (21) 22830830 (Ext. 424)  
Fax: +98 (21) 22289455  
Email: [aghasemof@iiees.ac.ir](mailto:aghasemof@iiees.ac.ir)



## RESEARCH INTERESTS

- Structural Optimization
- Metaheuristic and Intelligent Algorithms for Structural Optimum Design
- Performance-Based Design (PBD) in Structural Engineering
- Probabilistic Seismic Damage and Loss Assessment
- Nonlinear Modeling and Analysis of Structures
- Reliability and Safety Assessment of Structures

## EDUCATION

**K.N. Toosi University of Technology** Tehran, Iran  
Ph.D. in Civil Engineering – Earthquake Engineering February 2022  
*Thesis:* “A new algorithm for multi-objective optimum design of structures based on life-cycle cost.”  
*Supervisor:* Masoud Mirtaheri, PhD  
*Advisor:* Reza Karami Mohammadi, PhD  
*Committee Members:* Mohammad R. Mashayekhi (chair), Behrouz Asgarian, Mohammad R. Zolfaghari, Homayoon Estekanchi, Abdoreza S. Moghadam

**K.N. Toosi University of Technology** Tehran, Iran  
M. Sc. in Civil Engineering – Structural Engineering February 2014  
*Thesis:* “Evaluation of the pros and cons of the uniform deformation algorithm in optimum design of structures.”  
*Supervisor:* Prof. Reza Karami Mohammadi  
*Committee Members:* S. Bahram Beheshti Aval (chair), Homayoon Estekanchi

**K.N. Toosi University of Technology** Tehran, Iran  
B. Sc. in Civil Engineering September 2011

## RESEARCH EXPERIENCE

**Regional Water Company of Khorasan Razavi (through Iran’s National Elites Foundation)** Mashhad, Iran  
**Researcher** 2022-2024  
**Project:** “Seismic and Risk Assessment of Dams in Razavi Khorasan Province”

- Conducted seismic hazard and risk assessment for major dams in Razavi Khorasan Province.
- Performed site-specific hazard evaluation, total risk analysis, and probabilistic risk ranking to support inspection and retrofit prioritization.
- Completed the project for the Regional Water Company as an alternative to compulsory military service under the supervision of the Iran’s National Elites Foundation.

**TEACHING EXPERIENCE****University of Bojnord**

Bojnord, Iran

**Lecturer**

2024-2025

**Undergraduate Courses:**

- Statics
- Physics
- Steel Structures Project

**Graduate Courses:**

- Theory of Elasticity

**Hakim Sabzevari University**

Sabzevar, Iran

**Lecturer**

2023-2024

**Undergraduate Courses:**

- Statics

**Beyhagh Institute of Higher Education**

Sabzevar, Iran

**Lecturer**

2016-2017

**Undergraduate Courses:**

- Fundamentals of Earthquake Engineering
- Concrete Structures I & II
- Concrete Structures Project

**K.N. Toosi University of Technology**

Tehran, Iran

**Teaching assistant**

2010-2013

**Undergraduate Courses:**

- Structural Analysis I & II

**Graduate Courses:**

- Dynamics of Structures (2012-2013)

**ACADEMIC HONORS**

- Ranked **1st** among M.Sc. graduates in Structural and Earthquake Engineering, K.N. Toosi University of Technology, Tehran, Iran, 2014. (*Awarded direct admission to the Ph.D. program without entrance exam*)
- Ranked **4th** among B.Sc. graduates in Civil Engineering (out of 70 students), K.N. Toosi University of Technology, Tehran, Iran, 2011. (*Awarded direct admission to the M.Sc. program without entrance exam*)
- Ranked **2nd** in the 4th Iran National Concrete Competition (in Structural Lightweight Concrete), Amirkabir University of Technology, Tehran, Iran, 2010.
- Ranked **3rd** in the 4th Iran National Concrete Competition (in Non-Structural Lightweight Concrete), Amirkabir University of Technology, Tehran, Iran, 2010.

**PROFESSIONAL AFFILIATIONS AND REVIEW ACTIVITIES**

- **Reviewer** for *Journal of Building Engineering*, *Soil Dynamics and Earthquake Engineering*, *Structures*, *Scientific Reports*, and *Asian Journal of Civil Engineering*

**PUBLICATIONS****Journal papers**

1. Ghasemof A, Mirtaheeri M, Karami Mohammadi R, Salkhordeh M, "A multi-objective optimization framework for optimally designing steel moment frame structures under multiple seismic excitations", *Earthquakes and Structures*, vol. 23, no. 1, pp. 035-057, 2022, <https://doi.org/10.12989/eas.2022.23.1.035>.
2. Ghasemof A, Mirtaheeri M, Karami Mohammadi R, "Multi-objective optimization for probabilistic performance-based design of buildings using FEMA P-58 methodology", *Engineering Structures*, vol. 254, pp. 113856, 2022, <https://doi.org/10.1016/j.engstruct.2022.113856>.
3. Ghasemof A, Mirtaheeri M, Karami Mohammadi R, "Effects of demand parameters in the performance-based multi-objective optimum design of steel moment frame buildings", *Soil Dynamics and Earthquake Engineering*, vol. 153, pp. 107075, 2022, <https://doi.org/10.1016/j.soildyn.2021.107075>.
4. Ghasemof A, Mirtaheeri M, Karami Mohammadi R, Mashayekhi MR, "Multi-objective optimal design of steel MRF buildings based on life-cycle cost using a swift algorithm", *Structures*, vol. 34, pp. 4041–4059, 2021, <https://doi.org/10.1016/j.istruc.2021.09.088>.
5. Ghasemof A, Mirtaheeri M, Karami Mohammadi R, "A new swift algorithm for bi-objective optimum design of steel moment frames", *Journal of Building Engineering*, vol. 39, pp. 102162, 2021, <https://doi.org/10.1016/j.jobbe.2021.102162>.
6. Karami Mohammadi R, Ghasemof A, "Performance-based design optimization using uniform deformation theory: A comparison study", *Latin American Journal of Solids and Structures*, vol. 12, no. 1, pp. 18–36, 2015, <https://doi.org/10.1590/1679-78251207>.
7. Karami Mohammadi R, Ghasemof A, "Performance-based design optimization under the set of earthquake records using the uniform deformation theory", *Modares Civil Engineering journal*, vol. 15, no. 1, pp. 165-175, 2015, [https://mcej.modares.ac.ir/article\\_11774.html](https://mcej.modares.ac.ir/article_11774.html).

**Conference papers**

1. Karami Mohammadi R., Ghasemof A., "Performance-Based Design Optimization Using Theory of Uniform Deformation in Compare with Metaheuristics", In 5th National Conference on Earthquake & Structure, Kerman, Iran, 2014, <https://en.civilica.com/doc/283148/>.