

CURRICULUM VITAE

Personal Information

First Name: Tahereh EMail: korouzhdehhsu@yahoo.com

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Researchgate: 

Google Scholar: 



Areas of Interest

- Structural optimization
- Concrete technology
- Microstructure of cement base materials
- Metaheuristic algorithms (Ant Colony, Firefly, Particle Swarm, Gray Wolf, etc.)
- Statistical method
- Image analysis
- Chemistry of cement
- Construction materials
- Fracture mechanics of concrete
- Finite element analysis (FEA)
- Engineering economics

Educational Qualification

2014-2017

M.Sc. in Structural Engineering, Hakim Sabzevari University, Sabzevar, Iran.

- **Total GPA:** 18.13/20.0
- **Thesis title:** Application of meta-heuristic algorithms in structural problems (composite beam and concrete technology)
- **Supervisor:** Dr. Hamid Eskandari-Naddaf, [Hakim Sabzevari University](#).
- **Advisors:** Dr. Rasoul Shadnia, [Hakim Sabzevari University](#).
Dr. Lianyang Zhang, [University of Arizona](#).
- **Description:** Almost all design problems in engineering can be considered as optimization problems that require optimization techniques to be solved. Since these problems are generally complex and difficult so that cannot be solved with traditional methods like mathematical programming, nature-inspired meta-heuristic algorithms can be used in this field. These methods because of their simple algorithm, high compatibility and applicability, are in group of the most popular optimization methods. In this research, the applicability of the meta-heuristic algorithms in structural and concrete technology problems has been addressed. Specifically, performance of improved ant colony optimization (IACO), firefly algorithm (FA), particle swarm optimization (PSO) and gray wolf optimizer (GWO) on the cost optimization of composite beam was investigated. Moreover, the optimization of the mixing design of cement mortar has been done to find the maximum compressive strength. A parametric study was also accomplished to evaluate the effects of various beam spans and loading conditions on the optimization process. The sensitivity analysis of the design parameters on the beam cost was also discussed. Flexural behavior of lightweight ferrocement panels and channels under the influence of different variables such as percentages of expanded perlite and clay LWAs, number of expanded rib lath layers, and loading spans has been evaluated.

2011-2014 B.Sc. in Civil Engineering, Hakim Sabzevari University, Sabzevar, Iran.

- **Total GPA:** 16.95/20.0

Honors and Achievements

2014-2017 Ranked top 3, Master's Program (Structural Engineering). Department of Civil Engineering, Hakim Sabzevari University.

2011-2014 Ranked top 3, Bachelor's Program. Department of Civil Engineering, Hakim Sabzevari University.

Publications

Journal Papers:

- **Korouzhdeh, T.**, & Eskandari-Naddaf, H. (2019). [Cost-safety optimization of steel-concrete composite beams using standardized formulation](#), Engineering Science and Technology, an International Journal, 22 (2), 523-532.
- **Korouzhdeh, T.**, Eskandari-Naddaf, H., & Gharouni-Nik, M. (2017). [An Improved Ant Colony Model for Cost Optimization of Composite Beams](#), Applied Artificial Intelligence An International Journal, 1, 44–63.
- Eskandari-Naddaf, H., & **Korouzhdeh, T.** (2016). [Cost optimization and sensitivity analysis of composite beams](#), Civil Engineering Journal, 2(2), 52-62.

Conference Papers:

- Eskandari, H. & **Korouzhdeh, T.** (2014). [Cost Optimization Analysis of Composite Beam. 4th International Conference on Composites Technology and Its Application in Urban Development](#). 4th International Conference on Composites: Characterization, Fabrication and Application, Tehran, Iran.
- Lezgy-Nazargah, M. & **Korouzhdeh, T.** (2015). [Comparison between classical and finite element in the bearing capacity of foundations on clay soil capacity](#). 2th national conference on soil mechanics and foundation engineering, Qom, Iran.

Academic Teaching and Research Experiences

Sep 2014-
Present

Lab researcher and technical assistant, [Modern Concrete Technology Laboratory](#), Department of Civil Engineering, Hakim Sabzevari University.

- Administrated studies in cost optimization of composite beam using meta-heuristic algorithms (ACO, FA, PSO and GWO).
- Studied the effect of cement fineness and different supplementary materials such as micro- and nano-silica on the macro- and micro-properties of cement mortar.

Feb 2017-
June 2017

Teaching assistant,, Engineering Economic under supervision of Dr. Eskandari-Naddaf, Hakim Sabzevari University.

Feb 2015-
June 2015

Teaching assistant, Construction planning equipment and methods under supervision of Dr. Eskandari-Naddaf, Hakim Sabzevari University.

Membership

2014-Present

ICI-Iranian Concrete Institute

2017-Present

Iran's National Elites Foundation

Language Proficiency

Persian:

Native

English: Intermediate

Computer skills

Programming Languages: Matlab (Numerical computing software), Minitab (Statistical analysis software)

Engineering Software: Abaqus (Finite Element Analysis software)

Civil Software: Etabs (Structural design/analysis software), Safe (Foundation design/analysis software), Sap (Structural design/analysis software), AutoCAD (Architectural/Drawing software)

Project Management: MS Project (Project Portfolio Management software)

Image analysis: MIP cloud, Digital Surf's Mountains Map, Image J

References

[Dr. Hamid Eskandari-Naddaf, Associate Professor](#)

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[Dr. Rasoul Shadnia, Assistant Professor](#)

Affiliation: Department of Civil Engineering, Hakim Sabzevari University, Sabzevar, Iran.

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[Dr. Lianyang Zhang, Professor](#)

Affiliation: Department of Civil and Architectural Engineering and Mechanics, University of Arizona, Tucson, AZ, USA.

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