Curriculum Vitae

Taha Bakhshpoori

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EDUCATION: **Ph.D.** (2016) and **M.Sc.** (2011), Structural Engineering, **Iran University of Science and Technology**,
Graduated with honors; Distinguished research student (2012), Research and educational fellowship awarded by the National Elite Foundation (2014 to 2016), Educational fellowship awarded by the Ministry of Science and Technology.
B.Sc. (2009) Civil Engineering, **University of Guilan**, Graduated with honors; Second-degree fellowship

RESEARCH INTERESTS:
- Machine Learning Algorithms, Artificial intelligence, Soft Computing based techniques, Metaheuristics, and their applications to non-linear complex problems.
- Analyzing the resilience of structures under extreme natural hazards (such as earthquakes).
- Modeling and solving complex structural optimization problems.
- Reliability, robust, and risk-based design optimization.

TEACHING EXPERIENCE:
2016-present: Associate Professor, University of Guilan, Department of Civil Engineering.
2012-2015: Lecturer, Department of Civil Engineering., Islamic Azad University, Branch of Roudehen.
Major Courses:
Expert Systems; Optimal Analyses; Reliability Analysis; Continuum Mechanics; Finite Element Analysis.
Mechanics of Materials I and II, Static, Fundamentals of Earthquake and Wind Engineering, RC Structural Design I and II, Cost Estimation and Project, Engineering Economics

INDUSTRIAL WORK EXPERIENCE
- Structural design of more than 800,000 m^2 RC and steel buildings and industrial frames for more than 13 years.
- Structural retrofitting supervision of buildings for more than 6 years.
- Construction supervision of buildings and industrial frames for more than 10 years.

PUBLICATIONS: (Google Scholar)

Book:

1. Metaheuristics: Outlines, MATLAB Codes and Examples, Springer, 2019

Journal:

2. T Bakhshpoori, A Asadi Abadi, "Orthogonal learning metaheuristics for structural optimization", *Neural Computing and Applications*. 2023, 35(26): 19497-19521.
3. T Bakhshpoori, AA Abadi, A Cheraghi, M Farhadmanesh, "Performance-Based Seismic Design Optimization of Steel MRFs Under System and Component Constraints Using the IWSA Algorithm", *Iranian Journal of Science and Technology, Transactions of Civil Engineering*. 2023, 1-24.
4. E Afshari, F Mossaiby, T Bakhshpoori, " Metaheuristic-based crack detection in beam-type structures using peridynamics theory: A comparative study", *Mechanics of Advanced Materials and Structures*, 2023, 1-15.
5. P Zakian, T Bakhshpoor, "Optimal design of multiple tuned mass dampers for controlling the earthquake response of randomly excited structures", 2023, *Acta Mechanica*, 1-22.
6. E Afshari, F Mossaiby, T Bakhshpoori, " On the application of peridynamics to crack detection in membranes using an upgraded metaheuristic." *Mechanica*. 2023, 1-15.
7. T Bakhshpoori, M Masoum Nejad, "Performance evaluation of U-shaped metallic-yielding damper in RC frames irregular in elevation."*Modares Civil Engineering journal*. 2023, 22(2), 50-75.

8. T Bakhshpoori, "Truss layout and size optimization considering dynamic constraints uisng water evaporation optimization algorithm." *IJOCE*. 2022, 12 (1), 125-142.
9. A Kaveh., KB Hamedani, SM Hosseini, T Bakhshpoori, "Optimal design of planar steel frame structures utilizing meta-heuristic optimization algorithms." *Structures*. 2020, 25, 335-346.
10. A Kaveh., KB Hamedani, T Bakhshpoori, "Optimal design of reinforced concrete cantilever retaining walls utilizing eleven meta-heuristic algorithms: a comparative study." *Periodica Polytechnica Civil Engineering*, 2020, 64(1), 156-168.
11. D Pourrostam, SY Mousavi, T Bakhshpoori, K Shabrang, "Modeling the compressive strength of concrete made with expanded perlite powder." *International Journal of Optimization in Civil Engineering*, 10(2), 2020, 201-215.
12. M. FakhariNia, T. Bakhshpoori, S. Pourzeynal, "The effect of lead rubber bearing sceismic isolator on progressive collapse potential of steel moment frames", *Sharif Journal of Civil Engineering*, 6(1.1), 2020, 79-90.
13. R Ghiamat, M Madhkhan, T Bakhshpoori. "Cost optimization of segmental precast concrete bridges superstructure using genetic algorithm", *Structural Engineering and Mechanics*, 2019, 72 (4), 503-512.
14. M Barkhori, MA Shayanfar, MA Barkhordari, T Bakhshpoori. "Kriging-Aided Cross-Entropy-Based Adaptive Importance Sampling Using Gaussian Mixture", *Iranian Journal of Science and Technology, Transactions of Civil Engineering*, 2019, 43; 81–88.
15. A Kaveh, T Bakhshpoori, SM Hamze-Ziabari. "Development of predictive models for shear strength of HSC slender beams without web reinforcement using machine-learning based techniques" *Scientia Iranica*, 2019, 26; (2), 709-725.
16. P Kakvan, T Bakhshpoori, S Pourzeynali, "The effect of earthquake aftershocks on the steel buildings with irregular plan", *Modares Civil Engineering journal*, 2019, 19 (1), 0-0.
17. R Ghiamat, M Madhkhan, T Bakhshpoori. "Optimal operators of genetic algorithm in optimizing segmental precast concrete bridges superstructure", *International Journal of Optimization in Civil Engineering*, 2019, 9 (4), 651-670
18. Z. M. Yaseen, M. T. Tran, S. Kim, T. Bakhshpoori, and R. C. Deo. "Shear strength prediction of steel fiber reinforced concrete beam using hybrid intelligence models: a new approach. " *Engineering Structures*, 2018; 177, 244-255.
19. M. Barkhori, M. A. Shayanfar, M. A. Barkhordari, and T. Bakhshpoori. "Kriging-Aided Cross-Entropy-Based Adaptive Importance Sampling Using Gaussian Mixture. "*Iranian Journal of Science and Technology, Transactions of Civil Engineering*, 1-8.
20. A Kaveh, T Bakhshpoori, SM Hamze-Ziabari, "GMDH-based prediction of shear strength of FRP-RC beams with and without stirrups" *Computers and Concrete*, 2018; 22(2): 197-207.
21. A. Kaveh, A. Dadras, and T. Bakhshpoori. "Improved thermal exchange optimization algorithm for optimal design of skeletal structures." *Smart Structures and Systems*, 2018: 21(3): 263-278.
22. Hamze-Ziabari, S. M., and T. Bakhshpoori. "Improving the prediction of ground motion parameters based on an efficient bagging ensemble model of M5′ and CART algorithms." *Applied Soft Computing*, 2018; 68: 147-161.
23. A Kaveh, T Bakhshpoori, SM Hamze-Ziabari, "M5'and Mars Based Prediction Models for Properties of Self-Compacting Concrete Containing Fly Ash", *Periodica Polytechnica Civil Engineering*, 2018, Accepted, (DOI: 10.3311/PPci.10799)
24. A Kaveh, T Bakhshpoori, SM Hamze-Ziabari, "Development of predictive models for shear strength of HSC slender beams without web reinforcement using machine-learning based techniques", *Scientia Iranica* ,2017, Accepted, (DOI: 10.24200/SCI.2017.4509)
25. A Kaveh, T Bakhshpoori, SM Hamze-Ziabari, "Patient rule-induction method for liquefaction potential assessment based on CPT data", *Bulletin of Engineering Geology and the Environment*, 2017, Accepted, (DOI: 10.1007/s10064-016-0990-3)
26. A Kaveh, SM Hamze-Ziabari, T Bakhshpoori, "Estimating drying shrinkage of concrete using a multivariate adaptive regression splines approach", *International Journal of Optimization in Civil Engineering*. 2018; 8 (2): 181-194.
27. A Kaveh, SM Hamze-Ziabari, T Bakhshpoori, "Feasibility of pso-anfis-pso and ga-anfis-ga models in prediction of peak ground acceleration", *International Journal of Optimization in Civil Engineering*. 2018; 8 (1):1-14.
28. A Kaveh, SM Hamze-Ziabari, T Bakhshpoori, "Soft computing-based slope stability assessment: A comparative study", *Geomechanics and Engineering*, 2018, 14 (3) 257-2697.
29. A Kaveh, T Bakhshpoori, SM Hamze-Ziabari, "New Model Derivation for the Bond Behavior of NSM FRP Systems in Concrete", *Iranian Journal of Science and Technology, Transactions of Civil Engineering*, 2017, 41(3): 249-262.
30. A Kaveh, SM Hamze-Ziabari, T Bakhshpoori, "M5'Algorithm for Shear Strength Prediction of HSC Slender Beams without Web Reinforcement", *International Journal of Modeling and Optimization*, 2017, 7 (1), 48
31. A Kaveh, T Bakhshpoori "An accelerated water evaporation optimization formulation for discrete optimization of skeletal structures", *Computers & Structures*, 2016, 177, 218-228.

32. A Kaveh, T Bakhshpoori. "An efficient multi-objective cuckoo search algorithm for design optimization". *Advances in Computational Design*, 2016, 1(1): 87-103.
33. A Kaveh, T Bakhshpoori. "A new metaheuristic for continuous structural optimization: Water evaporation optimization". *Structural Multidisciplinary Optimization*, 2016, 00: 1-23.
34. A Kaveh, T Bakhshpoori. "Water Evaporation Optimization: A novel physically inspired optimization algorithm". *Computers and Structures*, 2016, 167: 69-85.
35. A Kaveh, T Bakhshpoori, SM Hamze-Ziabari. "Derivation of New Equations for Prediction of Principal Ground-Motion Parameters using M5' Algorithm". *Journal of Earthquake Engineering*, 2016, 00: 1-21.
36. A Kaveh, T Bakhshpoori, E. Afshari. "Hybrid PSO and SSO algorithm for truss layout and size optimization considering dynamic constraints". *Structural Engineering and Mechanics*, 2015, 54(3): 453-474.
37. A. Kaveh, T Bakhshpoori. "Subspace search mechanism and cuckoo search algorithm for size optimization of space trusses". *Steel and Composite Structures*, 2015, 18(2): 289-303.
38. A Kaveh, T Bakhshpoori, M Azimi. "Seismic optimal design of 3D steel frames using cuckoo search algorithm". *Tall and Special Buildings*, 2015, 24(3): 210-227.
39. A Kaveh, T Bakhshpoori, M Barkhori. "Optimum design of multi-span composite box girder bridges using Cuckoo Search algorithm". *Steel and Composite Structures*, 2014, 17(5): 705-719.
40. A Kaveh, T Bakhshpoori, E Afshari. "An efficient hybrid Particle Swarm and Swallow Swarm Optimization algorithm". *Computers and Structures*, 2014, 143: 40-59.
41. M A Shayanfar, M Ashoory, T Bakhshpoori, B. Farhadi. "Optimization of modal load pattern for pushover analysis of building structures". *Structural Engineering and Mechanics*, 2013, 47(1): 119-129.
42. A Kaveh, M Ilchi-Ghazaan, T Bakhshpoori. "An improved ray optimization algorithm for design of truss structures". *Periodica Polytechnic (Civil Engineering)*, 2013, 57(2): 1-15.
43. A Kaveh, T Bakhshpoori, M Kalateh-Ahani. "Optimum plastic analysis of planar frames using ant colony system and charged system search algorithms". *Scientia Iranica*, 2013, 20(3): 414–421.
44. A Kaveh, T Bakhshpoori. "Optimum design of space trusses using cuckoo search algorithm with levy flights". *Iranian Journal of Science and Technology Transaction B- Engineering*. 2013, 37(c1):1-15.
45. A Kaveh, T Bakhshpoori. "Optimum design of steel frames using Cuckoo Search algorithm with Lévy flights". *Tall and Special Buildings*, 2013, 22(13): 1023-1036.
46. A Kaveh, T Bakhshpoori, M Ashoory. "An efficient optimization procedure based on cuckoo search algorithm for practical design of steel structures". *International Journal of Optimization in Civil Engineering*, 2012, 2(1): 1-14.
47. A Kaveh, T Bakhshpoori, E Afshary. "An optimization-based comparative study of double layer grids with two different configurations using cuckoo search algorithm". *International Journal of Optimization in Civil Engineering*, 2011, 1(4): 507-520.

REFERENCES

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