# Special Issue

# Soft Computing for Structural Health Monitoring

### Message from the Guest Editors

Soft computing methods, such as machine learning (artificial and deep neural networks), fuzzy logic, metaheuristics, and expert systems can effectively address some of these challenges through their advanced features, e.g., high computational feasibility, in addition to handling uncertainty and partial truth. Furthermore, current advances in the computing power of computers present an exceptional opportunity to use computational intelligence to supplement traditional SHM procedures. This Special Issue aims to provide a platform for the communication and fast publication of high-quality original research and review papers of scientists and engineers working on various aspects of SHM across the world. Topics include, but are not limited to:

- Digital twins;
- Surrogate modeling for SHM;
- Identification of nonlinear systems;
- Identification of complex systems (soil–structure interaction phenomenon);
- Output-only structural system identification;
- Sensor design and placement;
- Structural response forecasting and early warning;
- Numerical methods for new materials/structures.

### Guest Editors


Dr. Shiping Huang

Dr. Mohammad Fotouhi

Dr. Majid Ilchi Ghazaan

Dr. Yuxin Pan

Dr. Armin Dadras Eslamlou


### Deadline for manuscript submissions

closed (7 July 2023)


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# About the Journal

### Message from the Editor-in-Chief

Current urban environments are home to multi-modal transit systems, extensive energy grids, a building stock, and integrated services. Sprawling neighborhoods are composed of buildings that accommodate living and working quarters. However, it is expected that the cities and communities of the future will face complex and enormous challenges, including maintenance, interconnectivity, resilience, energy efficiency, and sustainability issues, to name but a few. A smart city uses advanced technologies and a digital infrastructure to improve the outcomes in every aspect of a city's operations. A smart building optimizes the experience of occupants, staff, and management by using a modern and connected environment. Innovations in technology that can bring dramatic improvements to design, planning, and policy are critical in developing the cities and buildings of the future.

### Editor-in-Chief

Prof. Dr. David Arditi
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JCR - Q2 (Construction and Building Technology) / CiteScore - Q1 (Architecture)

**Rapid Publication:**

manuscripts are peer-reviewed and a first decision is provided to authors approximately 15.1 days after submission; acceptance to publication is undertaken in 2.9 days (median values for papers published in this journal in the second half of 2025).