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Model-Free Structural Health Monitoring Approaches

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Message from the Guest Editors

In a broad categorization, structural health monitoring (SHM) systems can be divided into model-based and model-free (data-driven) approaches. The model-based approach detects damages using a numerical model and physical description of the structure behavior. The model-free approach generally relies on the analysis of the structure behavior using data-driven algorithms and without developing a numerical model of the structure. The main advantage of the model-free approach of SHM is its great potential for network-based real-time SHM.

This Special Issue will be focused on studies that present novel data-driven and model-free structural health monitoring systems for any type of structure or infrastructure. We welcome all studies that demonstrate the application of physical sensors and remote and smart sensing for developing a data-driven SHM system. Topics of interest include but are not limited to the following:

- structural health monitoring (SHM)
- data-driven
- model-free
- machine learning

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Special Issue



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Message from the Editor-in-Chief

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