Special Issue

Model-Free Structural Health Monitoring Approaches

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 thefollowing:

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

Guest Editors

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Sensors is a leading journal devoted to fast publication of the latest achievements of technological

developments and scientific research in the huge area of physical, chemical and biochemical sensors, including remote sensing and sensor networks. Both experimental and theoretical papers are published, including all aspects of sensor design, technology, proof of concept and application. Sensors organizes Special Issues devoted to specific sensing areas and applications each year.

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