Special Issue

Sensors, Big Data Analytics and Modeling for Infrastructure Monitoring and Maintenance

Message from the Guest Editors

The goal of the present Special Issue is to collect contributions in the disciplines of physical sensors, computer science, and engineering, to serve as a forum for researchers in the field of sensor technologies and sensing strategies and to foster the development of real-time SHM of real-life structures. In this regard, the following category of contributions are welcome:

- Sensor-oriented contributions, including wireless sensor networks, multi-functional materials, energy harvesting for SHM, MEMS sensors, and Internet of Things approaches;
- Big Data analytics, including machine learning and statistical approaches, emerging strategies for sensor fusion, AI-based data mining, and cloud/edge/fog computing for infrastructure maintenance;
- Model-based Big Data analytics methods, such as Kalman filtering, particle filtering, and similar time-series analysis for online and real-time damage detection;
- Computational modeling approaches for infrastructure simulation, stochastic, and deterministic optimization, response prediction, force prediction;
- High-performance computing frameworks, including parallel processing and reduced order modeling.

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About the Journal

Message from the Editor-in-Chief

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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