

Special Issue

Advancements in Intelligent Sensing Technologies for Major Infrastructure Monitoring

Message from the Guest Editors

The monitoring and maintenance of major infrastructure—such as bridges, tunnels, railways, highways, pipelines, and large-scale energy and transportation facilities—are essential for ensuring structural safety, operational reliability, and long-term sustainability. With increasing infrastructure scale, service life, and exposure to complex environmental and loading conditions, intelligent sensing technologies have become indispensable for real-time monitoring and condition assessment. This Special Issue aims to bring together original research and review articles on recent advancements in intelligent sensing technologies for major infrastructure monitoring. Emphasis is placed on intelligent sensing and monitoring systems, including sensor design, system architectures, interface circuits and edge hardware, distributed energy and power management, and data analysis methods supporting structural health monitoring, early warning systems, and predictive maintenance. We welcome contributions spanning fundamental research, sensing devices, and system integration, promoting the translation of intelligent sensing technologies into real-world major infrastructure monitoring.

Guest Editors

Prof. Dr. Tinghai Cheng

Dr. Hengyu Li

Dr. Yang Yu

Dr. Jianlong Wang

Dr. Xiaosong Zhang

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Sensors
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
sensors@mdpi.com

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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.

Editor-in-Chief

Prof. Dr. Vittorio M. N. Passaro
Department of Electrical and Information Engineering, Politecnico di
Bari, Via Orabona 4, 70126 Bari, Italy

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