Special Issue

Structural Health Monitoring in Civil Engineering Using Artificial Intelligence, Machine Learning and Novel Sensor Technologies

Message from the Guest Editor

The work of continuous monitoring is quite difficult and costly, particularly when there are a lot of measurement nodes. Although sporadic monitoring is simpler to set up, real-time structural monitoring is not possible with this technique. Furthermore, the measurements must be taken by an operator on-location, which is costly. Recent advancements in sensor technologies have led to many low-cost but efficient solutions for procuring long-term monitoring data from instrumented structural systems. This Special Issue's aim is to investigate creative techniques and intelligent practices for structural health monitoring (SHM). It will cover a wide array of subjects, from dealing with SMH to artificial intelligence (AI) in civil engineering. Special attention will be paid to the development of novel sensor technologies, for continuous SHM and smart concrete applications, including SAW-integrated sensors and distributed optical fiber sensors. The impact of climate extremes on the performance and long-term viability of built heritage will also be a focus.

Guest Editor

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Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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