Special Issue

Distributed Optical Fiber Sensors for Concrete Structure Monitoring

Message from the Guest Editors

Structural health monitoring (SHM) is a crucial process in the maintenance strategy for concrete infrastructures, as it enables real-time diagnosis of the integrity and the state of wear/damage of the structure. In this context, truly Distributed Fiber-Optic Sensor (DFOS) systems paired with an optoelectronic interrogator offer the possibility to record various measurands at thousands of locations along the fiber sensor, over long distances, and with a user-customizable spatial range down to the centimeter scale. This emerging technology is very promising for the SHM of large reinforced concrete structures, as it can provide both local/global information on material and structural characteristics like strain, temperature, sound, and vibration. For this Special Issue, we invite the submission of original research articles and reviews dedicated to recent developments in and research on experimental, practical, and theoretical aspects of the SHM of concrete structures using DOFS instrumentation. For detailed information, please visit here.

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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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