Special Issue

Fiber Optic Sensing in Civil Engineering: Recent Applications and Developments in Structural and Geotechnical Monitoring

Message from the Guest Editors

Civil structural health monitoring has become significantly more important within recent decades due to the rapidly growing demand for new constructions worldwide with respect to limited space and increased sustainability, as well as longer service lifetimes of existing structures. Knowledge about the structural performance is essential to the planning and design of condition-based maintenance works. Fiber optic sensing can be beneficial to obtain internal structural characteristics such as strain, temperature, or vibration over long distances. Discrete fiber Bragg gratings or even fully distributed sensing cables are directly embedded inside or attached along the infrastructure, which enables overall assessment of the structural behavior and performance. The Special Issue invites researchers and experienced engineers to submit their original articles and reviews discussing recent research developments or real-scale monitoring approaches based on fiber optic sensing in civil engineering applications.

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As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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