Special Issue

Elastic Waves and Acoustic Emission for Innovative Monitoring of Structures and Engineering Systems

Message from the Guest Editors

The present Special Issue focuses on elastic waves and acoustic emission (AE) for innovative uses in structural health monitoring (SHM) and condition monitoring of various engineering systems. Newer approaches are essential to attain breakthrough achievements using modeling tools and emerging artificial intelligence (AI) technologies. The following topical areas are listed as examples, and other synergic efforts are most welcome:

- Elastic wave methods with attenuation and dispersion for SHM;
- AE applications to large and small structures;
- Structural evaluation under extreme environments;
- NDE methods merging AI with elastic waves and AE;
- Feature analysis of crack-related AE signals;
- Remote monitoring for elastic waves and AE methods;
- Clustering methods for crack growth–crack faying discrimination;
- Sensor technology and wireless systems;
- AE for quality control processes;
- Elastic waves and AE methods with damage and fracture mechanics;
- Correlation of AE signal features to crack length.

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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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