Special Issue

Artificial Intelligence for Structural Health Monitoring, Inspection, Maintenance, and Rehabilitation of Civil Infrastructure

Message from the Guest Editors

Recently, artificial intelligence, especially machine learning, deep learning, computer vision, and large-scale models, has inspired novel progress and revolutional advances in structural health monitoring, inspection, maintenance, and rehabilitation. Advancements of full-field high-resolution sensing, multi-scale contextual modeling and digital twin, cascade inference in cyber space, accurate and robust recognition of multi-type damage and change, reasonable evaluation and credible assessment of structural condition, autonomous decision-making of maintenance strategies, swarm intelligence and human–machine–thing synergetic interaction, as well as various multi-modal large-scale models and high-effectiveness learning algorithms, greatly enhance the domain knowledge discovery, embedding, and intelligent applications for structural health diagnosis and performance improvement in a data–model–knowledge fusion-driven manner. This Special Issue aims to provide a platform to share current scientific original research and engineering technical applications of the related topics.

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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.

Editor-in-Chief

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