Special Issue

Intelligent Assessment on Durability of Concrete Structures

Message from the Guest Editors

As global infrastructure ages and environmental challenges intensify, the durability assessment of concrete structures has become a critical focus in civil engineering. While traditional evaluation methods are constrained by inefficiencies in manual inspection and limited data integration capabilities, rapid advancements in intelligent technologies offer transformative potential for this field.

This Special Issue invites research that bridges theoretical breakthroughs, algorithmic innovations, and engineering practices, with an emphasis on the deep integration of AI with traditional mechanical models. Submissions addressing industrial case studies and scalable solutions are particularly encouraged. This Special Issue seeks to create a technical framework for intelligent durability assessments, ultimately supporting the data-driven lifecycle management of infrastructure.

The recommended topics include, but are not limited to, the following:

Intelligent inspection technologies;
Data-driven modeling;
Multiscale simulations;
Durability evaluation of civil engineering materials;
Decision-support systems;
Standardization evolution.

Guest Editors

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Message from the Editor-in-Chief

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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