

# Special Issue

## Advanced Technologies and Approaches for the Condition Monitoring of Railway Transportation Infrastructure

### Message from the Guest Editors

In recent decades, increases in traffic volumes, and dynamic loads together with the progressive aging of infrastructure assets, have posed major challenges to railway infrastructure management. The integration of multi-sensor data, physics-based modelling, and data-driven techniques has opened new opportunities for the real-time and quantitative assessment of the health condition of railway infrastructure components.

Within this context, the present Special Issue aims to collect the latest scientific contributions on advanced technologies and methodologies for the condition monitoring of railway transportation infrastructure. We welcome original research articles and critical reviews that address theoretical, numerical, and experimental aspects, including (but not limited to) the following thematic areas:

- Bridge direct structural health monitoring;
- Bridge indirect structural health monitoring through on-board measurements;
- Artificial intelligence applied to condition monitoring of railway network components;
- Development of cutting-edge solutions and technologies for novel sensing devices;
- Track degradation assessment.

We look forward to your contribution.

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### Guest Editors

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