



Advances in Predictive Maintenance for Critical Infrastructure

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Message from the Guest Editors

Critical infrastructures are vital for modern living, providing essential services such as water and gas utilities, transportation networks (e.g., airports and rail stations), communication networks, and the smart electric power grid.

However, these infrastructures are vulnerable to attacks. Recent advancements in artificial intelligence (AI) can help to identify the hazards, risks, and gaps in resilience and enhance the critical infrastructure protection.

The Special Issue will showcase significant advancements in artificial intelligence, machine learning, signal, and information processing that aim to mitigate failures and increase the resilience of critical infrastructure, including anomaly detection, strategies, and security. The Issue will highlight key innovations in these fields and their potential impact on critical infrastructure development and management. This Session covers, but is not limited to, the following topics:

- Critical infrastructure protection;
- Infrastructure resilience;
- Intelligent systems;
- Machine learning and deep learning;
- Regulatory and normative aspects;
- Safety and security;
- Sensor signal processing;
- Sensor networks topology and design;





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Message from the Editor-in-Chief

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