

## Special Issue

# Asymmetric and Symmetric Data Analysis in Equipment Fault Diagnosis and Health Management

### Message from the Guest Editors

This Special Issue seeks to present the latest breakthroughs in the diagnosis, prognosis, and health management of mechanical systems. Mechanical equipment is a cornerstone of industrial operations, and its reliability is essential for minimizing downtime and reducing operational costs. This Special Issue will spotlight advanced methodologies, with a particular focus on asymmetric data analysis and symmetric data analysis, harnessing the power of artificial intelligence (AI) and machine learning to enhance fault diagnosis, failure prediction, and prognostic health management. We encourage submissions exploring a wide range of topics, including fault detection techniques, condition monitoring, predictive maintenance, and the integration of IoT-based solutions, all underpinned by innovative data analysis approaches.

### Guest Editors

Dr. Zuoyi Chen

Prof. Dr. Yiwei Cheng

Dr. Guoqiang Li

Dr. Weixiong Jiang

### Deadline for manuscript submissions

31 July 2026



## Symmetry

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### Message from the Editor-in-Chief

Symmetry is ultimately the most important concept in natural sciences. It is not surprising then that very basic and fundamental research achievements are related to symmetry. For instance, the Nobel Prize in Physics 1979 (Glashow, Salam, Weinberg) was received for a unified symmetry description of electromagnetic and weak interactions, while the Nobel Prize in Physics 2008 (Nambu, Kobayashi, Maskawa) was received for the discovery of the mechanism of spontaneous breaking of symmetry, including CP symmetry. Our journal is named *Symmetry* and it manifests its fundamental role in nature.

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### Editor-in-Chief

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