

## Special Issue

# Smart Fault Diagnosis and Predictive Maintenance in the Era of Industrial AI: Theories, Methods, and Applications

### Message from the Guest Editors

This Special Issue aims to provide a platform for researchers and practitioners to share their recent advances, innovations, and challenges in advanced identification, fault detection and diagnosis. We welcome high-quality original research papers, review articles, and case studies that address relevant topics including, but not limited to, the following:

- Advanced FIDD theories and methodologies
- Data-driven fault diagnosis (machine learning, deep learning, etc.)
- Model-based and hybrid fault diagnosis strategies
- Feature extraction and fusion for weak fault detection
- Multi-source signal-based FIDD (vibration, acoustic emission, etc.)
- Fault prediction and health management (PHM)
- FIDD for specific complex engineering systems
- Performance evaluation of fault diagnosis systems
- Industrial application case studies of FIDD technologies

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### Guest Editors

Dr. Di Song  
Prof. Dr. Feiyun Xu  
Prof. Dr. Nan Wu

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### Deadline for manuscript submissions

31 October 2026



## Processes

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You are invited to contribute either a research article or a comprehensive review for consideration and publication in *Processes* (ISSN 2227-9717). *Processes* is published in open access format – research articles, reviews, and other content are released on the internet immediately after acceptance. The scientific community and the general public have unlimited, free access to the content. As an open access journal, *Processes* is supported by the authors and their institutes through the payment of article processing charges (APCs) for accepted papers. We would be pleased to welcome you as one of our authors.

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