

Special Issue on **Intelligent Feature Learning Methods for Machine Condition Monitoring**

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Massive data are being collected in various industries to monitor the health conditions of mechanical and electrical equipment. Mechanical signals including vibration signals, acoustic signals, images, etc., are sensitive to abnormal/fault conditions, which usually show the characteristics of impulsive transients. However, these repetitive transients are typically weak, especially when the equipment starts its fault at the initial stage. Moreover, environmental noises cause further interference for extracting fault information.

Traditional signal processing methods can somehow handle the above challenges with proper design of filtering, artificial feature extraction, and fault monitoring and detection. However, these steps usually require significant human efforts and they cannot be easily extended to solve new problems. To overcome the aforementioned difficulties, artificial intelligence-based methods such as deep learning can have the potential to transform machine monitoring towards an automatic and smart direction.

The aim of this Special Issue is to promote intelligent condition monitoring, and act as a platform to present high-quality original research on the latest developments of condition monitoring methods. We welcome both original research articles and review articles discussing the current state of the art.

Potential topics include but are not limited to the following:

- ▶ Deep learning-based fault diagnosis and prognosis
- ▶ Degradation analysis for critical components in machines
- ▶ Cross-domain transfer learning for robust condition monitoring
- ▶ Model parameters optimization for satisfactory model learning
- ▶ Advance approaches for vibration signal pre-processing
- ▶ Improved learning approaches with massive unlabeled data and limited labeled data

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/sv/iflmm/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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