# Artificial Intelligence for Data-Driven Fault Detection and Diagnosis

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## Message from the Collection Editors

The recent development of information and communication technologies has engendered the concept of the smart factory that adds intelligence into the manufacturing process to drive continuous improvement, knowledge transfer, and data-based decision making. Fault Detection and Diagnosis has long been recognized as one of the important aspects of improving the reliability of industrial process systems. With the development of Artificial Intelligence algorithms and IoTs solutions and sensors, the reliability of automatic Fault Detection and Diagnosis is ever-increasing.

The aim of this Topical Collection is to highlight innovative developments with respect to the current challenges and opportunities for the applications of Artificial Intelligence for Fault Detection and Diagnosis. Topics include but are not limited to:

- Real-time Fault Detection and Diagnosis with Machine Learning and Deep Learning
- IoT-enabled predictive maintenance
- IoT and Edge Computing-based Condition Monitoring
- Anomaly Detection for Fault Detection and Diagnosis
- Fault Diagnosis in multivariate control charts
- Data Mining approaches for Fault Detection and Diagnosis

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**Topical**Collection

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## Message from the Editor-in-Chief

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