Artificial Intelligence in Fault Diagnosis and Signal Processing

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Message from the Guest Editors

The detection and diagnosis of faults is essential in industrial processes, as the early detection of faults avoids damage that may be irreparable to machinery, which would reduce the performance of the control system and reduce the process efficiency, which would result in a decrease in production. Additionally, in terms of industrial safety, this would facilitate safer operations, reducing the risk to plant workers. Therefore, the early detection and correct diagnosis of faults will facilitate decision making that allows corrective actions to be taken to repair damaged components. In recent years, various machine fault detection techniques have emerged; additionally, artificial intelligence and signal processing are essential to achieving this goal. However, the topic continues to generate new trends in methodologies related to multiple fault detection, novelty detection, data mining, development in hardware, etc.

The goal of this issue is to bring researchers and industrial practitioners together to share their research findings and present ideas that are relevant in the field of fault diagnosis using artificial intelligence and signal processing.

Special issue

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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