Industrial AI: Applications in Fault Detection, Diagnosis, and Prognosis

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Message from the Guest Editors

In the fourth industrial revolution, or Industry 4.0, a key objective is to enhance equipment's ability to perceive its own health state and predict future behavior. The development of artificial intelligence, especially the progress made in deep learning, in the recent decade provides a promising tool in bolstering this enhancement. Such a tool can be a complement or alternative to conventional physics-based and signal-processing-based techniques in fault detection, diagnosis and prognosis applications.

Researchers have started to build data-driven or hybrid models to further boost their prediction accuracy in the above applications, yet there are still some untouched or underexplored territories, such as causal inference, demystifying the black-box modelling, domain adaptation, automatic feature learning, etc. This special issue is to present current innovations and engineering achievements of scientists and industrial practitioners in the area of adopting artificial intelligence techniques in fault detection, diagnosis and prognosis.

Special Issue

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Message from the Editor-in-Chief

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