# Information Theory and Its Application in Machine Condition Monitoring

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## Message from the Guest Editors

Condition monitoring (CM) techniques have been rapidly advancing in recent years for promoting the productivity and reliability of large-scale engineering systems. This advancement is greatly impacted by the progress in information theory and computing technologies, evidenced by many published works in CM fields, such as Shannon entropy, Lempel-ziv complexity, and permutation entropy. As a statistical measure, information theory can be used to quantify complexity and detect dynamic change by taking into account the nonlinear behavior of time series. The information theory can be served as a promising tool to extract the dynamic characteristics of machines, which is useful in developing effective condition monitoring techniques.

The last decade has witnessed an increasingly growing research interest in information theory. This Special Issue aims to provide a platform to present high-quality original research as well as review articles on the latest developments of information theory and its application in machine condition monitoring.

Special Issue

## Editor-in-Chief

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## Message from the Editor-in-Chief

The concept of entropy is traditionally a quantity in physics that has to do with temperature. However, it is now clear that entropy is deeply related to information theory and the process of inference. As such, entropic techniques have found broad application in the sciences.

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