Special Issue

Multi-Sensor Fusion Technology for Feature Extraction and Intelligent Fault Diagnosis

Message from the Guest Editors

Multi-sensor fusion technology significantly enhances the accuracy and robustness of fault diagnosis by integrating heterogeneous sensor data to build a global perception model of environments or equipment. In fields such as industrial manufacturing and agricultural machinery, individual sensors are prone to interference from noise, occlusion, and other factors, while multi-source data fusion can compensate for information blind spots, enabling early fault warning and precise localization. This Special Issue primarily includes, but is not limited to, research on signal processing methods and data fusion methods. Fusion technologies are mainly signal-level fusion, feature-level fusion, decision-level fusion, and hybrid fusion. Main applications include industrial equipment health management, intelligent monitoring of agricultural machinery, and perception systems for autonomous vehicles.

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Sensors is a leading journal devoted to fast publication of the latest achievements of technological developments and scientific research in the huge area of physical, chemical and biochemical sensors, including remote sensing and sensor networks. Both experimental and theoretical papers are published, including all aspects of sensor design, technology, proof of concept and application. Sensors organizes Special Issues devoted to specific sensing areas and applications each year.

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