Topical Collection

Sensors for Fault Diagnosis, Fault Tolerance and Resilient Control

Message from the Collection Editor

The presence of faults/failures in mechanical systems generate many adverse consequences, including damage to system components and endangerment of humans' working conditions. The early detection of faults could potentially reduce the severe impacts and increase the safety and reliability of systems. Therefore, the development of fault detection and diagnosis (FDD) methodologies for mechanical systems to detect the faults is of paramount importance. In addition, in highly automated systems such as unmanned autonomous vehicles, where maintenance and repair of the faulty systems cannot be carried out immediately, it is necessary to employ fault-tolerant control and/or resilient control to ensure the desired missions can be completed despite the presence of faults in the system. This Special Issue focuses on fault diagnosis, fault tolerance, and resilient design for mechanical and industrial systems. The topics include but are not limited to:

- Model-based and data-driven fault diagnosis methods;
- Fault detection, isolation, and accommodation;
- Fault tolerant control and fault recovery;
- Design for reliability, safety, and resilience;

Collection Editor

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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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