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Nonlinear Model-Based Fault Detection for Industrial Applications

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submissions:

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Message from the Guest Editors

Motivated by the need for reliable and safe modern industrial systems, Fault Detection and Isolation (FDI) schemes are the most sought-after solutions in the last two decades. However, model-based FDI approaches have been mostly designed for the simple or linearized model of systems. This also requires the accurate knowledge of system dynamics. Moreover, the inevitable sources of unknown nonlinearities, model uncertainties, exogenous disturbances, and inadequate measurable outputs make the FDI design for industrial systems

This motivates the aim of this Special Issue of *Sensors*. Accordingly, I cordially invite researchers to contribute original and unique articles, as well as review papers. The topics of interest include (with emphasis on practical industrial systems), but are not limited to:

- Condition monitoring;
- Fault detection and isolation;
- Data-driven approaches including machine learning methods;
- Fault detection and diagnosis;
- Incipient faults;
- Industrial systems;
- Model-based approaches;
- Nonlinear models;
- Observer design;
- Unknown inputs.



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Special Issue



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Message from the Editor-in-Chief

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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