

## Special Issue

# Progress in Design and Optimization of Fault Diagnosis Modelling

### Message from the Guest Editors

With the increasing complexity of modern engineering systems, the reliability, maintainability, and safety of such systems are increasingly required. Researchers continue to dedicate themselves to the theoretical and technical research that is necessary and critical to reduce the occurrence of catastrophic accidents, environmental pollution, personal and property damage, and to improve economic benefits. This Special Issue seeks high-quality works focusing on fault diagnosis, process supervision, safety monitoring, sustainability, and health-aware and fault-tolerant control, as well as state-of-the-art applications and emerging research directions. Topics include, but are not limited to, the following:

- Active Fault Detection and Identification (FDI) and Fault Tolerant Control (FTC);
- Analysis of reliability, safety, and security;
- Artificial intelligence and data driven FDI and FTC methods;
- Cybersecurity and cyberphysical systems;
- FDI and FTC for hybrid, discrete-event, and fractional order systems;
- Health monitoring and maintenance engineering;
- Model-based FDI and FTC for linear, nonlinear, and hybrid systems;
- Predictive and preventive maintenance and prognostics.

### Guest Editors

Prof. Dr. Xiaoyong Gao

Prof. Dr. Maoyin Chen

Prof. Dr. Chaodong Tan

Prof. Dr. Yi Liu

### Deadline for manuscript submissions

25 December 2025



## Processes

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Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[processes@mdpi.com](mailto:processes@mdpi.com)

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### Editor-in-Chief

Prof. Dr. Giancarlo Cravotto

Department of Drug Science and Technology, University of Turin, Via P. Giuria 9, 10125 Turin, Italy

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