# **Special Issue**

## Machine Learning for Fault Detection and Control

### Message from the Guest Editor

The advent and rapid advancement of artificial intelligence (AI), machine learning (ML), and deep learning (DL) techniques have opened up new avenues for the efficient and accurate detection, diagnosis, and rectification of system faults. The core focus of this Special Issue lies in soliciting the latest research, innovations, and applications of AI, ML, and DL in the realm of fault detection and control. We aim to bring together a broad spectrum of interdisciplinary research to present the most recent and exciting advancements in this field. We invite original research and review articles that discuss novel AI/ML/DL-based methods for fault detection, isolation, diagnosis, and recovery. Research areas may include (but are not limited to) the following:

- Application of supervised, unsupervised, and reinforcement learning for fault detection;
- Deep learning approaches for real-time fault diagnosis;
- Novel AI architectures for predictive maintenance;
- Al-powered fault-tolerant control systems;
- Advances in hybrid models incorporating traditional methods with ML/DL;
- Case studies applying AI/ML/DL for fault management in real-world scenarios.

### **Guest Editor**

#### Dr. Ahmed Ragab

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### Deadline for manuscript submissions

closed (15 March 2024)



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## About the Journal

## Message from the Editor-in-Chief

*Electronics* is a multidisciplinary journal designed to appeal to a diverse audience of research scientists, practitioners, and developers in academia and industry. The journal is devoted to fast publication of latest technological breakthroughs, cutting-edge developments, and timely reviews of current and emerging technologies related to the broad field of electronics. Experimental and theoretical results are published as regular peer-reviewed articles or as articles within Special Issues guest-edited by leading experts in selected topics of interest.

### Editor-in-Chief

Prof. Dr. Flavio Canavero Department of Electronics and Telecommunications, Politecnico di Torino, 10129 Torino, Italy

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