

## Special Issue

# Performance-Explainable Fault Diagnosis and Advanced Control Techniques for Industrial Dynamic Systems

### Message from the Guest Editors

This Special Issue addresses the need to develop performance-explainable advanced technologies, considering fault diagnosis and control applications in any industrial systems. The scope of this Special Issue includes, but is not limited to, the following topics(1)

Fault detection, isolation, and estimation of industrial dynamic systems;(2) Visualization and interpretability analysis toward extracted features or model behavior;(3)

Stability analysis related to state observers, diagnostics, and controllers;(4) Predictive- and learning-based control to improve the security and stability of industrial systems;(5) Fault detection of smart grid, aerospace system, and UAVs;(6) Fuzzy control and sliding mode control of nonlinear systems;(7)

Neural-network-assisted system dynamics analysis and parameter identification;(8) Applications of advanced control in industrial systems.

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### Guest Editors

Dr. Guangtao Ran

Dr. Hongtian Chen

Dr. Zhuofu Pan

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### Deadline for manuscript submissions

30 November 2024



## Machines

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## About the Journal

### Message from the Editor-in-Chief

*Machines* is an international, peer reviewed journal on machinery and engineering. It publishes research articles, reviews and communications.

Our aim is to encourage scientists to publish their experimental and theoretical results in as much detail as possible. There is no restriction on the length of the papers. Full experimental and/or methodical details must be provided.

There are, in addition, unique features of this journal: Manuscripts regarding research proposals and research ideas will be particularly welcomed; Electronic files or software regarding the full details of the calculation and experimental procedure - if unable to be published in a normal way can be deposited as supplementary material.

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### Editor-in-Chief

Prof. Dr. Antonio J. Marques Cardoso  
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