

## Special Issue

# Advances in Nonlinear and Adaptive Control of High-Precision Intelligent Machines

### Message from the Guest Editor

High-precision position tracking in precision machining, robotics, and industrial automation faces challenges like control saturation, parameter perturbations, and disturbances. Intelligent controller design within advanced adaptive control offers a significant advancement, enhancing system robustness and accuracy, crucial for aerospace, automotive, and manufacturing. This approach addresses limitations of traditional sliding mode control, improving convergence speed and reducing chattering, paving the way for sophisticated, autonomous systems capable of self-improvement. This Special Issue focuses on hybrid adaptive control strategies for high-precision intelligent machines, addressing unknown initial states, parameter perturbations, and external disturbances. We welcome papers related to intelligent electrical machines and their control. Topics include:

- Adaptive control
- Intelligent machines
- Nonlinear control
- Hybrid adaptive control
- Artificial intelligence
- Intelligent control
- Cyber-physical systems
- High-precision servo systems
- Precision engineering

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### Guest Editor

Dr. Saleem Riaz

School of Automation, Northwestern Polytechnical University, Xi'an 710072, China

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### Deadline for manuscript submissions

31 August 2026



## Machines

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*Machines*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
machines@mdpi.com

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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  
CISE–Electromechatronic Systems Research Centre, University of  
Beira Interior, Calçada Fonte do Lameiro, P-6201-001 Covilhã, Portugal

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#### Journal Rank:

JCR - Q2 (Engineering, Mechanical) / CiteScore - Q1  
(Control and Optimization)

#### Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 17.6 days after submission; acceptance to publication is undertaken in 2.7 days (median values for papers published in this journal in the second half of 2025).