

## Special Issue

# Advanced Nonlinear and Learning-Based Control Techniques for Complex Dynamical Systems

### Message from the Guest Editors

There has been a great deal of excitement during the recent past over the emergence of new mathematical techniques for the modeling and analysis of complex dynamical systems. Nonlinear and learning-based control system theory and various design techniques are used widely in the robotics arena, especially in developing nonlinear robust control algorithms. The design of these systems involves advanced techniques including nonlinear optimization, machine learning, adaptive estimation, and nonlinear observer and control design methodologies. In this context, this Special Issue welcomes the submission of papers from a wide range of researchers in applied mathematics and various engineering disciplines. Potential topics include, but are not limited to:

- Nonlinear optimization techniques;
- Nonlinear observer design;
- Nonlinear adaptive estimation;
- Nonlinear robust control;
- Reduced-order modeling and control;
- Learning-based/intelligent control;
- Neuro-adaptive control;
- Gaussian-process-based control methods;
- Real-time learning-based control;
- Multi-agent systems control;
- Formation/flocking control;
- Geometric control theory and applications.

---

### Guest Editors

Prof. Dr. Mahmut Reyhanoglu

Dr. Erkan Kayacan

Dr. Mohammad Jafari

---

### Deadline for manuscript submissions

closed (15 September 2023)



## Electronics

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.6  
CiteScore 5.3



[mdpi.com/si/130883](https://mdpi.com/si/130883)

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

[mdpi.com/journal/  
electronics](https://mdpi.com/journal/electronics)





# Electronics

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.6  
CiteScore 5.3



[mdpi.com/journal/  
electronics](https://mdpi.com/journal/electronics)



## 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

---

### Author Benefits

#### High Visibility:

indexed within Scopus, SCIE (Web of Science), CAPus /  
SciFinder, Inspec, Ei Compendex and other databases.

#### Journal Rank:

JCR - Q2 (Physics, Applied) / CiteScore - Q2 (Control and  
Systems Engineering)

#### Rapid Publication:

manuscripts are peer-reviewed and a first decision is  
provided to authors approximately 16.4 days after  
submission; acceptance to publication is undertaken in 2.4  
days (median values for papers published in this journal in  
the second half of 2024).