

## Special Issue

# Using Data Augmentation for Vision-Based Deep Reinforcement Learning

### Message from the Guest Editors

The aim of this Special Issue is to facilitate the advancement of research in the field of vision-based deep RL by addressing critical challenges and opening new avenues for investigation. In this Special Issue, original research articles and reviews are welcome. Research areas may include (but are not limited to) the following:

- Techniques and methodologies for data augmentation in vision-based systems.
- Applications of RL in environments with visual input.
- Performance comparison of RL models with and without data augmentation.
- The impact of synthetic and real-world data on the learning efficiency and accuracy of RL systems.
- Case studies detailing the implementation of vision-based RL systems in various domains.
- Theoretical insights or reviews on the convergence properties of augmented RL algorithms.
- Innovations in hardware and software that enhance the training of RL systems using augmented data.

### Guest Editors

Dr. Kai Vahldiek

Institute for Information Engineering, Ostfalia University of Applied Sciences, Salzdahlumer Str. 46/48, 38302 Wolfenbüttel, Germany

Prof. Dr. Dirk Joachim Lehmann

Department of Computer Science, Ostfalia University of Applied Sciences, Salzdahlumer Str. 46/48, 38302 Wolfenbuettel, Germany

### Deadline for manuscript submissions

15 August 2025



## Electronics

an Open Access Journal  
by MDPI

Impact Factor 2.6  
CiteScore 6.1



[mdpi.com/si/208576](https://mdpi.com/si/208576)

*Electronics*  
Editorial Office  
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 6.1



[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), CAPlus /  
SciFinder, Inspec, Ei Compendex and other databases.

#### Journal Rank:

JCR - Q2 (Engineering, Electrical and Electronic) /  
CiteScore - Q1 (Electrical and Electronic Engineering)

#### Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 16.8 days after submission; acceptance to publication is undertaken in 2.4 days (median values for papers published in this journal in the first half of 2025).