

Special Issue

Reinforcement Learning: Sample Efficiency, Generalisation, and AI Applications

Message from the Guest Editors

This Special Issue seeks to highlight **recent advances**, **novel applications**, and **underexplored dimensions** of RL that are shaping the future of intelligent systems. We particularly welcome contributions that introduce innovations in **experience replay**, **algorithm design**, **sample efficiency**, **generalisation**, **safety**, **interpretability**, and **real-world deployment**. We invite researchers and practitioners from diverse disciplines to contribute high-quality work—ranging from theoretical developments and methodological insights to applied research and interdisciplinary case studies. This is a timely opportunity to exchange ideas, inspire new directions, and spotlight impactful use cases of RL. **Topics of Interest include, but are not limited to the following:**

- RL for robotics, dexterous manipulation, and swarm intelligence;
- RL in autonomous driving, drone navigation, and transport systems;
- Sample-efficient, generalisable, and robust RL algorithms;
- New paradigms in experience replay and memory architectures;
- RL in control of nuclear plants, water systems, and renewable energy grids
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Guest Editors

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Deadline for manuscript submissions

15 September 2026



Electronics

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Impact Factor 2.6
CiteScore 6.1



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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 guestedited by leading experts in selected topics of interest.

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