# Special Issue

# Advanced Reinforcement Learning in Internet of Things Networks

### Message from the Guest Editors

The proliferation of the Internet of Things (IoT) has revolutionised how devices, systems, and people interact. IoT networks are increasingly complex, dynamic, and heterogeneous, posing significant challenges in resource allocation, energy efficiency, security, and scalability. Reinforcement learning (RL), particularly deep RL and multi-agent RL, has emerged as a powerful tool to address these challenges, enabling intelligent decision making and adaptive control in IoT ecosystems. This Special Issue seeks to gather innovative research and cutting-edge developments in applying RL techniques to optimise IoT networks. We invite contributions addressing theoretical advancements, novel algorithms, system architectures, and practical applications of RL in the context of IoT. Submissions focusing on interdisciplinary approaches and real-world deployments are especially encouraged.

### Guest Editors

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### Deadline for manuscript submissions

closed (10 November 2025)

# About the Journal

### Message from the Editor-in-Chief

The journal *Mathematics* publishes high-quality, refereed papers that treat both pure and applied mathematics. The journal highlights articles devoted to the mathematical treatment of questions arising in physics, chemistry, biology, statistics, finance, computer science, engineering and sociology, particularly those that stress analytical/algebraic aspects and novel problems and their solutions. One of the missions of the journal is to serve mathematicians and scientists through the prompt publication of significant advances in any branch of science and technology, and to provide a forum for the discussion of new scientific developments.

### Editor-in-Chief

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