



## IEEE Open Journal of Control Systems (OJ-CSYS)

### Special Section on Intersection of Machine Learning with Control

\*This special section is recurring.

Harnessing the power of machine learning to continuously monitor anomalies and extract useful information advances the state of the art in instrumentation control. Learning-enabled systems have been rapidly increasing in size and acquiring new capabilities. These systems are increasingly deployed in complex operating environments, where safety is paramount. Ensuring safety requires both robustness to extreme events and reliable monitoring for anomalous or unsafe behavior. While traditional machine learning systems are typically evaluated pointwise with respect to a fixed test set, such static coverage provides only limited assurance when exposed to unprecedented conditions in real-world environments. This limitation highlights a pressing challenge: “How can we design and deploy learning-enabled systems that remain robust to extreme events while monitoring them for anomalous and unsafe behavior?” This special issue aims to contribute to this growing area of interest and thus calls for papers in this topical area.

Prospective authors are invited to submit original contributions on related topics including, but are not limited to, the following:

- Machine learning for dimensionality reduction and system identification
- Emerging theory and applications for learning-based control
- Data-driven optimization and control for dynamical systems
- Safe reinforcement learning and safe adaptive control
- Bridging model-based and learning-based control systems
- Distributed learning over distributed systems
- Reinforcement learning for multi-agent systems
- Optimization, dynamics and control for machine learning
- Reinforcement learning and statistical learning for dynamical and control systems

#### **Special Section Schedule:**

- **Special Section Submission Window: 30 September 2025 – 15 May 2026**
- Notification of reviews and recommendations: 10 weeks after initial submission
- Final notification of regular papers: 20 weeks after initial submission
- Manuscript publication on IEEE Xplore: 24 weeks after initial submission

\* Review process starts at time of manuscript submission

**Submission Site:** <https://css.paperplaza.net/>

**Length:** 10-15 pages, not including references. Justification of longer papers is required.

**Discounts:** A number of discounts on APCs are expected to be available for papers published in this special section; see the website or inquire with the editorial assistant for more updated information.

***Open Journal of Control Systems (OJ-CSYS)** covers significant theoretical and applied developments that impact the field of dynamic systems and control. The field integrates elements of sensing, communication, decision and actuation components as relevant for the analysis, design and operation of dynamic systems and control. The systems considered include: technological, physical, biological, economic, organizational and other entities, and combinations thereof.*

### Guest Senior Editor



Name: **Insoon Yang**  
Affiliation: **Seoul National University, South Korea**

### Guest Associate Editors



Name: **Thomas Beckers**  
Affiliation: **Vanderbilt University, United States**



Name: **Riccardo Bonalli**  
Affiliation: **Université Paris-Saclay, France**



Name: **Thinh Doan**  
Affiliation: **University of Texas at Austin, United States**



Name: **Ashish Hota**  
Affiliation: **Indian Institute of Technology Kharagpur, India**



Name: **Bin Hu**  
Affiliation: **University of Illinois Urbana-Champaign, United States**



Name: **Andrea Iannelli**  
Affiliation: **University of Stuttgart, Germany**



Name: **Abolfazl Lavaei**  
Affiliation: **Newcastle University, United Kingdom**



Name: **Mircea Lazar**  
Affiliation: **Eindhoven University of Technology, Netherlands**



Name: **Lars Lindemann**  
Affiliation: **ETH Zurich, Switzerland**



Name: **Kostas Margellos**  
Affiliation: **University of Oxford, United Kingdom**



Name: **Romain Postoyan**  
Affiliation: **CNRS, CRAN, Université de Lorraine, France**



Name: **Stephen Tu**  
Affiliation: **University of Southern California, United States**