Intersection of Machine Learning with Control

*This special section is recurring.

Unprecedented technological advances have fueled the creation of devices that can collect, generate, store, and transfer large amounts of data. This massive data outpour is profoundly changing the way in which complex engineering problems are solved, calling for the conception of new interdisciplinary tools at the intersection of machine learning, dynamic systems and control, and optimization. While the repurposing of control theories building on new Machine Learning methods can be highly successful, Dynamic Systems and Control can greatly contribute to analyze and devise novel adaptive, safety-critical controllers with performance guarantees. This special issue aims to contribute to this growing area of interest and calls thus 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 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 multiagent 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: 15 September 2022 – 30 April 2023**
- Notification of reviews of 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: 12 pages or under, not including references. Justification of longer papers is required.

Open Journal of Control Systems (OJ-CSYS) *is a new journal which 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.*

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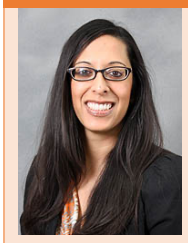

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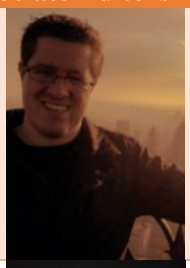

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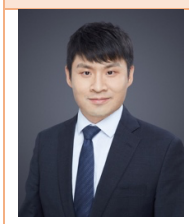

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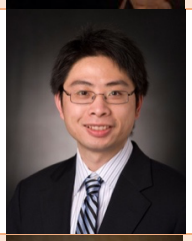

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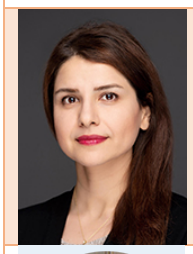

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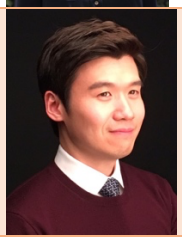

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