Call for Papers:

IEEE Open Journal of Control Systems (OJ-CSYS)

Special section on Modeling, Control, and Learning Approaches for Human-Robot Interaction Systems

Despite significant advances in robotics and autonomy, human participation is essential for the practical utilization and performance of such systems. An individual may act as a decision-maker, supervisor, or collaborator of a robot, working together to achieve a common goal. The synergy of human intelligence with robots has been shown to improve the joint human-robot system performance and reduce workload. There are many important aspects to enable effective human-robot interaction (HRI), e.g., the design of user-friendly human-machine interfaces and meta-analysis of human factors affecting robot behaviors. Among all these aspects, there is a great demand to perform system-level analysis, estimation, and prediction and provide performance guarantees for these HRI systems. The problem is challenging due to the uncertain nature of human behaviors and interactions with robots. This, therefore, calls for innovations in the modeling, control, and learning approaches and their integrations for HRI systems. This special issue aims to contribute to this rapidly growing area of interest among control practitioners and calls thus for papers in this topical area.

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

- Computational, quantitative, and dynamic models for HRI systems
- Learning, modeling, and prediction of human intent and performance
- Shared control, teleoperation, or haptic control of robots
- Human-robot collaborative assembly and manufacturing
- Human-robot cooperative manipulation
- Human-robot and robot-human handover
- Motion planning and control of autonomous vehicles in mixed traffic
- Assisted driving and (semi-)autonomous vehicles
- Upper limb and lower limb wearable exoskeleton control systems
- Human-multi-robot and human-swarm interactions
- Human-robot teaming and task allocation
- Robot navigation in human crowds
- Human-robot joint decision-making
- Reinforcement learning, imitating learning, and learning-based control for HRI systems
- Modeling, control, and learning methods for physical HRI, cognitive or social HRI

Special Section Schedule:

- **Special Section Submission Window: 28 December 2022 – 30 June 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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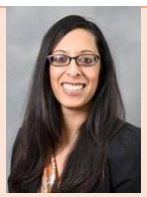

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