Call for Papers:

IEEE Open Journal of Control Systems (OJ-CSYS)

Special Section on Control and Monitoring of Next-Gen Urban Infrastructure: Applications to Power, Transportation, and Water Systems

Climate change, overpopulation, aging infrastructure, urbanization, and the natural finiteness of earth's resources has pushed urban designers, city planners, policy makers, scientists, and engineers to rethink traditional control and design paradigms, and to look for holistic solutions to ensure the safety, resilience, security, and efficiency of operating new infrastructure. In particular, the three key infrastructure – electric power systems, water systems, and traffic networks – all face monumental challenges related to real-time operation. To that end, this special section focuses on presenting and sharing new control algorithms and architectures for the next generation of urban infrastructure with a specific focus on power, transportation, and water systems. The scope of each of these infrastructures is defined within the list of topics below.

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

Power systems:
- Transmission and distribution systems
- Operation and feedback control problems
- State estimation and monitoring algorithms
- Control-theoretic cyber-security problems
- Decarbonization of power systems and climate change mitigation
- Control/monitoring of low-carbon power systems
- Learning algorithms for power systems modeling and control

Transportation systems:
- Connected and autonomous vehicles control problems
- Traffic control and prediction
- Control-theoretic cyber-security methods
- Learning algorithms for transportation systems modeling and control
- State estimation of advanced traffic dynamics

Water systems:
- Drinking water distribution networks
- Stormwater and urban drainage systems
- Flood control systems
- Hydraulics and water quality
- Feedback control algorithms
- State estimation and calibration methods
- Learning algorithms for water systems
- Smart sensing and control
- Digital twins for water systems
- Cyber-physical security of water infrastructure

Multi-infrastructure problems:
- Water-energy nexus and joint control of water-power networks
- Electrification of transportation systems
- Joint control of electrified transportation and power distribution networks

Special Section Schedule:

- **Special Section Submission Window: 15 October 2023 – 15 April 2024**
- 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.
Discounts: The first 8 papers published in this special section are eligible for a 50% discount on APCs.

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.*

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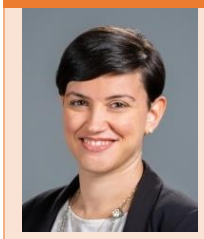

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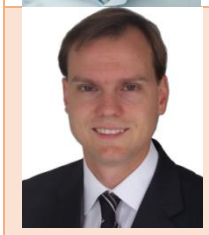

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