Advanced Application of Artificial Intelligence in Networked Control Systems

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Message from the Guest Editors

Decision making in networked systems has been intensively investigated to address the accurate, responsive and safe implementation of cyber-physical systems in industrial manufacturing or public services. In most cases, however, the desired performance of the networked system is not easy to guarantee due to the lack of precise knowledge of the system or the complexity of the large-scale networks. We see the potential of artificial-intelligence-based methods, especially reinforcement learning methods, which generate flexible decision-making schemes by learning from the interaction between the decision maker and the system.

This Special Issue aims to bridge the gap between reinforcement learning and reliable decision making for networked systems. The scope includes theoretical and experimental studies that contribute to novel developments in fundamental research and its applications. The particular topics of interest include, but are not limited to:

- networked system
- decision making
- data-driven control
- reinforcement learning
- safety-critical system
- cyber-physical systems
- artificial intelligence-based control design
- embedded systems

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Message from the Editor-in-Chief

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