

Special Issue

Sensor-Enabled Analysis and Control of Networked Control Systems

Message from the Guest Editor

Recent advances in sensing technologies have significantly enhanced the capabilities of networked control systems (NCSs), enabling real-time acquisition of critical physical and environmental data across distributed and complex environments. Sensor-enabled NCSs facilitate accurate state estimation and robust control strategies that can effectively address challenges such as communication delays, packet losses, bandwidth limitations, and cyber-physical security threats. However, the integration of large-scale sensor networks into NCSs raises new challenges in data processing, network resource allocation, fault tolerance, and system scalability. In addition, the emergence of data-driven and machine learning-based control approaches offers new opportunities for improving adaptability, resilience, and decision-making under network-induced constraints. The purpose of this Special Issue is to highlight innovative developments related to the modeling, analysis, optimization, and control of sensor-enabled NCSs.

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Sensors is a leading journal devoted to fast publication of the latest achievements of technological developments and scientific research in the huge area of physical, chemical and biochemical sensors, including remote sensing and sensor networks. Both experimental and theoretical papers are published, including all aspects of sensor design, technology, proof of concept and application. *Sensors* organizes Special Issues devoted to specific sensing areas and applications each year.

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