EURASIP Journal on Advances in Signal Processing

Special Issue on Recent Advances on Estimation and Filtering in Networked Dynamic Systems

Networked dynamic systems have been extensively investigated in academic research and engineering applications in the past two decades. Different from traditional systems, networked dynamic systems are complex systems involving network environments and/or large-scale systems consisting of many individual subsystems which are interconnected by networks. Among all the research directions for networked dynamic systems, the estimation and filtering scheme is one of the most important aspects since it may significantly degrade the performances of the whole system if it has not been well addressed. This special issue aims to present some recent advances in theory and applications of estimation and filtering for networked dynamic systems with various constraints.

Potential topics include, but are not limited to:

- Stability and Estimation in networked systems with time-delays, disturbances, and uncertainties
- Robust filtering approaches with guaranteed performances
- Estimation in networked systems with hybrid and/or nonlinear dynamics
- Distributed filtering for sensor networks with channel fading and/or packet losses
- Estimation with sensor saturations and failures
- Coordinated and/or consensus-based estimation over networks
- Information security in sensor networks
- Filter design with channel quantization and limited bandwidth
- Decentralized/distributed computation algorithms over sensor networks
- Randomized, gossip and message passing algorithms
- Decentralized/distributed signal processing over networks
- Distributed and cooperative optimization of networked systems
- Robust estimation under malicious attacks
- H-infinity estimation with stochastic parameters through sensor networks
- Filter design with event-triggered mechanisms
- Fault detection approaches for sensor networks
- Capacity and performance analysis for estimation and filtering algorithms
- Applications of estimation and filtering in sensor networks, multi-robot systems, smart grids, etc.
Submission instructions

Before submission, authors should carefully read over the Instructions for Authors, which are located at asp.eurasipjournals.com/authors/instructions. Prospective authors should submit an electronic copy of their complete manuscript through the SpringerOpen submission system at editorialmanager.com/JSIG according to the submission schedule. They should choose the correct Special Issue in the “sections” box upon submitting. In addition, they should specify the manuscript as a submission to the “Special Issue on Recent Advances on Estimation and Filtering in Networked Dynamic Systems” in the cover letter. All submissions will undergo initial screening by the guest editors for fit to the theme of the Special Issue and prospects for successfully negotiating the review process.

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