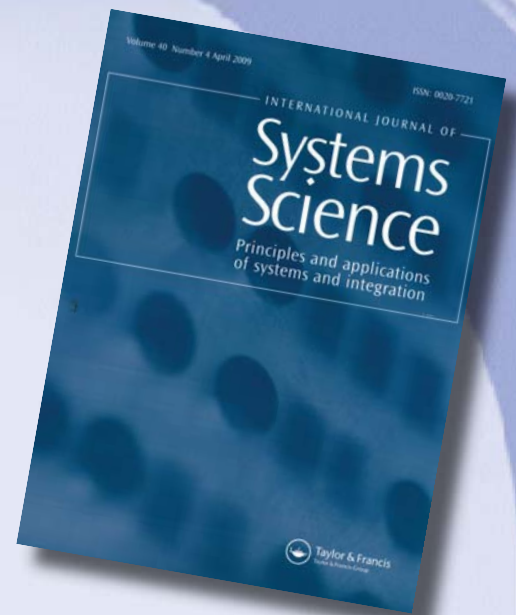


CALL FOR PAPERS

Special Issue on New Advances in H-infinity Control and Filtering for Nonlinear Systems



While the H-infinity control and filtering theory for linear systems was well established by the beginning of 1990s, the H-infinity methods for nonlinear systems are still being actively developed varying from rigorous substantiation of nonlinear H-infinity approach to technical design of advanced H-infinity algorithms for special classes of nonlinear systems. Advanced technologies are promoting new applications of the H-infinity control and filtering in such areas as network-based communication, adaptive control, signal processing, and fault detection. Novel techniques, such as H_2/H_∞ - approach, stochastic H-infinity, H-infinity methods for time-delay systems, LMI-based algorithms, energy-to-peak optimization, risk-sensitive methods, and others, have successfully complemented the classical H-infinity theory.

The objective of this special issue is to summarize recent advances in H-infinity control and filtering for nonlinear systems, including time-delay, hybrid, and stochastic systems. The solicited papers should provide new ideas and approaches, clearly indicating the advances made in problem statements, methodologies, or applications with respect to the existing results. The focus of this special issue will be on advanced and non-traditional methods presenting considerable novelties in theoretical background or experimental setup. The papers presenting applications to newly emerging fields are especially welcome.

Topics to be covered in this special issue include, but not limited to, the following:

- Advances in H-infinity control and filtering theory for nonlinear systems, including time-delay, hybrid, and stochastic systems;
- Novel H-infinity control and filtering methods for nonlinear systems, in particular, LMI-based algorithms, energy-to-peak optimization, risk-sensitive methods;
- Applications of nonlinear H-infinity control and filtering to actual real-world problems, including network-based communication, signal processing, adaptive control, and fault detection, and newly emerging fields.

Author's Schedule

Submission of Manuscript
Notification of Acceptance
Final Manuscript Due
Tentative Publication Date

December 1, 2009
June 1, 2010
August 1, 2010
January 2011

All submissions are subject to review, and acceptance will be limited to papers needing only moderate revisions. The prospective authors should submit a pdf version of their complete manuscript via email to one of the following Guest Editors:

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