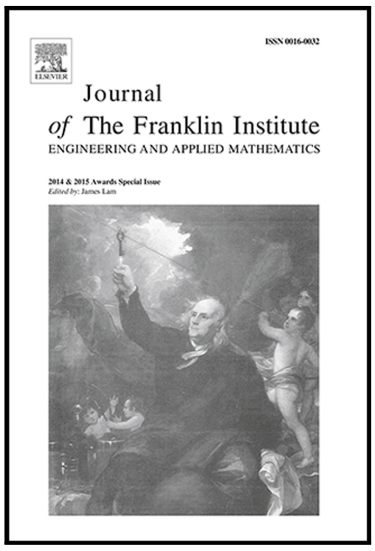

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Robust Cooperative Output Regulation of Heterogeneous Uncertain Linear Multi-Agent Systems by Intermittent Communication[☆]

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Abstract

In this paper, we study the robust cooperative output regulation problem of heterogeneous linear multi-agent systems with system uncertainties and directed communication topology. A robust distributed event-triggered control scheme is proposed based on the internal model principle. To avoid continuous monitoring of measurement errors for the event-triggering condition, a novel self-triggered control scheme is further proposed. Moreover, by introducing a fixed timer in the triggering mechanisms, Zeno behavior can be excluded for each agent. An example is finally provided to demonstrate the effectiveness of the proposed self-triggered control scheme.

Keywords: Multi-agent systems, robust cooperative output regulation, event-triggered control, self-triggered control, directed communication topology.

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