Robust Event-Triggered Cooperative Output Regulation of Heterogeneous Linear Uncertain Multi-Agent Systems

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Abstract

In this paper, we study the robust event-triggered cooperative output regulation problem of heterogeneous linear multi-agent systems with system uncertainties and directed communication topologies. To deal with the heterogeneity problem, a so-called internal reference model is proposed for each agent, and the system uncertainties can be handled by utilizing the internal model principle. Then, a novel distributed event-triggered control scheme is developed. Furthermore, with the proposed control scheme, Zeno behavior can be excluded for each agent by introducing a strictly positive timer. An example is finally provided to demonstrate the effectiveness of the control scheme.

About the Speaker

Mr. HU Wenfeng is a Ph.D. candidate in Department of Mechanical and Biomedical Engineering at City University of Hong Kong. He received the B.S. degree in information and
computing science from Chongqing University of Technology, Chongqing, China, in 2009 and the M. Eng. degree in computer software and theory from Chongqing University, Chongqing, China, in 2012. His current research interests include multi-agent systems, event-triggered control, and output regulation.

All are welcome!
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