

学术报告会

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地点：电院群楼2-530会议室

Consensus with input saturation via low gain feedback

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Abstract:

This talk introduces the problem of leader-following consensus of a linear multi-agent system on switching networks. The input of each agent is subject to saturation. Low gain feedback based distributed consensus protocols are developed. It is established that, under the assumptions that each agent is asymptotically null controllable with bounded controls and that the network is connected or jointly connected, semi-global leader-following consensus of the multi-agent system can be achieved. Based on a low-gain output feedback method, distributed consensus protocols are developed. Under the assumptions that the networks are connected or jointly connected and that each agent is asymptotically null controllable with bounded controls and detectable, semi-global observer-based leader-following consensus of the multi-agent system can be reached on switching networks.

Biography:

苏厚胜，华中科技大学自动化学院副教授、博士生导师、教育部新世纪优秀人才、华中学者。2008年毕业于上海交通大学自动化系获工学博士学位、2008年至2010年在香港城市大学电子工程系博士后、多次在香港大学机械工程系作为高级访问学者从事合作研究工作。2010年上海市优秀博士学位论文奖获得者、2011年亚洲控制会议最佳论文提名奖。作为项目负责人主持国家自然科学基金、教育部博士点基金和湖北省自然科学基金等多项科研项目。发表SCI论文40多篇和英文专著1本，5篇SCI期刊论文入选2003-2013 ESI高被引论文，所发表论文包括自动控制领域国际主流学术刊物IEEE Transactions on Automatic Control, Automatica, IEEE Transactions on Cybernetics, IEEE Transactions on Circuits and Systems-I: Regular Papers和IEEE Transactions on Industrial Electronics等。国际期刊The Scientific World Journal和Journal of Applied Mathematics的Editorial Board Member；国际期刊IET Control Theory & Applications和Mathematical Problems in Engineering的Guest Editor；亚洲控制会议和中国控制会议的Associate Editor。