

学术报告会

时间：2014年2月20日(周四)10:30-11:30

地点：电院群楼2-410会议室

Distributed Networked System with Communication

Constraints: Analysis and Synthesis

Prof. Daniel W. C. HO
City University of Hong Kong



Abstract:

A distributed network system (DNS) consists of a large number of small, inexpensive agents deployed over a vast region, in which each agent is capable of collecting, processing information and communication with neighboring agents. Node collaboration is the key for the success of DNSs due to the fact that each node itself is limited by communication range, power, and processing ability. An interesting aspect of the dynamics in DNSs is that certain types of globally collective behavior emerge from local interactions among the nodes. Consensus in DNSs requires the integration of the stability, control, filtering and sensing aspects of the information processing and computational analysis. In this talk, we shall present some recent work on the consensus performance of DNS under network induced imperfect communication. These constraints include partial-information transmission, packet loss, time-delay and quantization.

Biography:

Daniel Ho received BSc, MSc and PhD degrees in mathematics from the University of Salford (UK) in 1980, 1982 and 1986 respectively. From 1985 to 1988, he was a Research Fellow in Industrial Control Unit, University of Strathclyde (Glasgow, Scotland). In 1989, he joined the Department of Mathematics, City University of Hong Kong. Prof. Ho is Associate Editor of 5 international journals including Asian Journal of Control, Journal of Franklin Institute, and a member of Editorial board of IET Control Theory. He is awarded Chang Jiang Chair Professor, by Ministry of Education, China in 2012.