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Flocking of Multi-agent Dynamical Systems Based on Pseudo-leader Mechanism

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Venue: Room **CD634**, Hong Kong Polytechnic University
Reception starts at 4:15pm
(Language: **English**)

Abstract

Flocking behavior of multiple agents can be widely observed in nature such as schooling fish and flocking birds. Recent results have proposed the possibility that flocking is possible even only a small fraction of agents are informed of the desired position or velocity. However, it is still a challenging problem to determine which agents should be informed or have the ability to detect the desired information. This talk aims to address this problem. By combining the ideas of virtual force and pseudo-leader mechanism, where a pseudo-leader represents an agent who can detect the desired information, we propose a scheme for choosing pseudo-leaders in a multi-agent group.

About the Speaker

Jin Zhou received her M.Sc. in Mathematics and Statistics from Wuhan University in June, 2006. Now she is a Ph.D. candidate in Mathematics and Statistics of Wuhan University since September, 2006 and a Research Assistant in the Electronic and Information Engineering of Hong Kong Polytechnic University since August, 2007 (under the supervision of Michael Small). Her research interests include chaotic dynamics, nonlinear systems, complex networks, control and synchronization.

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