学术报告会

时间：2012年11月9日(周五)10:00-12:00

地点：电院群楼2-410会议室

Multirobot Control Technology: Formation Control and Task Allocation

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Abstract:

This talk will focus on two research topics in multirobot cooperation area: Multirobot Formation Control and Multirobot Task Allocation. These two issues have been hot research topics and attracted many researchers in the past decade. The talk will be divided into two parts, with the first part on Multirobot Formation and the second part on Multirobot Task Allocation. In Multirobot Formation control, a leader-follower strategy will be presented. By decomposing the leader-follower formation problem into a single robot tracking problem, a receding-horizon controller is then incorporated for resolving the tracking problem under an exponential convergent rate. In Multirobot Task Allocation, a resource-constrained modeling framework will be firstly presented, followed by a leader-follower coalition method, an online coalition method, and an offline coalition method to resolve the proposed task allocation problem.

Biography:

Dr. Jian Chen was born in Changzhou, Jiangsu, China. He graduated from the University of Science and Technology of China in 2004, and received the Ph.D. degree in robotics from the Joint Advanced Research Institute held by both the City University of Hong Kong and the University of Science and Technology of China in 2009. From 2009 to 2011, he was a senior research associate at the Department of Manufacturing Engineering and Engineering Management, the City University of Hong Kong. Since 2011, he joined the TAMS group, the University of Hamburg as a postdoctoral research fellow. Jian Chen's research interests include non-holonomic system control, multirobot formation control and task allocation, multirobot distributed transportation, and climbing robot.