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Lecture by

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Multi-agent formation navigation in a feasible space-constrained environment

可行空间受限环境中的多智能体编队导航

In recent years, the rapid development of sensor and communication technology enables the application of multi-agent coordination in complex environments, such as geographical exploration, search and rescue , cooperative reconnaissance and monitoring. Under this trend, multi-agents systems are more likely to work in cluttered environments, where safety constraints like obstacles and inter-agent collision avoidance can not be ignored. We will explore in this talk on how to systematically integrates collision-free navigation into multi-agent formation.



Professor Zhang graduated from Huazhong University of Science and Technology with PhD in Control Theory and Control Engineering in 2007. In September 2007, she taught at the Department of Control Science and Engineering in the College of Electronic and Information Engineering, Tongji University. In 2010, she was awarded associate professor and supervisor for master students. From December 2011 to December 2013, she worked as a "Xiang Jiang Scholar" to do the postdoctoral research in the Department of Mechanical and Biological Engineering in the City University of Hong Kong, whose collaborator is the IEEE Fellow Professor Gary Feng. Her research interests include the Autonomous systems, multi-agent systems, data based optimization and control, safety and security, multi-robot systems and so on. She has published over 100 papers, and over 90 papers are published on Automatica and IEEE transaction magazine, 13 authorized invention patents. She won eight provincial and ministerial awards, including one First Prize of Shanghai Natural Award, two First Prize of Shanghai Science and Technology Progress, and one Second Prize of Ministry of Education Natural Award.