



# The Hong Kong Polytechnic University Department of Applied Mathematics

## **Seminar Series**

Leader-follower game with uncertainty in information structures

By

### Prof. Shujun WANG Shandong University

#### Abstract

This study formalizes two types of modeling uncertainties in a stochastic Stackelberg linear-quadratic (LQ) differential game and then discusses the associated robust Stackelberg strategy design for either the leader or follower. We consider the time-inconsistency for leader follower with different information structure, in particular, the open-loop, closed-loop without memory, and Markov decision information. We also consider the possible time delay and its effects to decision in leader-follower pattern. Some numerical results of the abovementioned robust strategies are also presented.

Date: 28 May 2022 (Saturday) Time: 20:00-20:45 (Hong Kong Standard Time GMT +8) Venue: Online Talk via Zoom (Meeting ID: 980 5064 6508) Speaker: Prof. Shujun Wang, Shandong University Host: Dr. James Huang, The Hong Kong Polytechnic University Click to join: https://polyu.zoom.us/j/98050646508?pwd=T3ljeVk0cnQ2eXJDSDdiT3JBU2QyQT09



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For enrolment, please send your name and email to wai-yan.moon@polyu.edu.hk on or before 27 May 2022