國立中山大學應用數學系
學術演講

講　者：Prof. Jean-Pierre Fouque

(University of California Santa Barbara)

講　題：Reinforcement Learning Algorithm for Mixed Mean Field Control Games

時　間：2023/03/09（Thursday）14:10 ~ 15:00

地　點：理 SC 4009-1 教室

茶　會：13:30

Abstract

We present a new combined Mean Field Control Game (MFCG) problem which can be interpreted as a competitive game between collaborating groups and its solution as a Nash equilibrium between the groups. Within each group the players coordinate their strategies. An example of such a situation is a modification of the classical trader's problem. Groups of traders maximize their wealth. They are faced with transaction cost for their own trades and a cost for their own terminal position. In addition they face a cost for the average holding within their group. The asset price is impacted by the trades of all agents. We propose a reinforcement learning algorithm to approximate the solution of such mixed Mean Field Control Game problems. We test the algorithm on benchmark linear-quadratic specifications for which we have analytic solutions.

Joint work with A. Angiuli, N. Detering, Mathieu Laurière, and J. Lin.

敬 請 公 告！ 歡 迎 參 加！

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