

February 11th, 2022
Zoom Meeting
3:30 P.M. - 4:30 P.M.
Friday

Prof. Thibaut Mastrolia
(UC Berkeley)

Market Making and incentives design in the presence of a dark pool

Abstract: We consider the issue of a market maker acting at the same time in the lit and dark pools of an exchange. The exchange wishes to establish a suitable fees policy to attract transactions on its venues. We first solve the stochastic control problem of the market maker without the intervention of the exchange. Then we derive the equations defining the optimal contract to be set between the market maker and the exchange. This contract depends on the trading flows generated by the market maker's activity on the two venues. In both cases, we show existence and uniqueness, in the viscosity sense, of the solutions of the Hamilton-Jacobi-Bellman equations associated with the market maker and exchange's problems. We finally design deep reinforcement learning algorithms enabling us to efficiently approximate the optimal controls of the market maker and the optimal incentives to be provided by the exchange.

Zoom link:

Topic: MF Colloquium/Probability seminar

Time: Feb 11, 2022 03:30 PM Pacific Time (US and Canada)

Join Zoom Meeting

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