Séminaire de Probabilités et Statistiques

Mardi 13 décembre à 14h00
Laboratoire Dieudonné
Salle de Conférences

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Optimal incentives for mean field agents in interaction

We consider a model where a Principal requires to design separate contracts with a large number of Agents in interaction. We focus on the optimal design of these contracts, and study in particular the mean field limit of this problem. Considering an infinite number of agents in Nash equilibrium, this leads to the consideration of mean field FBSDE, and allows to rewrite the corresponding problem as a control one on McKean-Vlasov SDEs. We solve completely and discuss the asymptotic convergence for special cases, which go beyond the usual linear-quadratic framework.

This is a joint work with Dylan Possamai (Univ. Paris-Dauphine) and Thibaut Mastrolia (Ecole Polytechnique).