

Mean field games theory

ECTS : 6

Volume horaire : 24

Description du contenu de l'enseignement :

The course will be divided into three parts. In the first one, we will study various concepts of analysis on the spaces of measures (differentiability, different metrics, convexity, monotonicity, optimality conditions, ...). In the second part, we will apply those concepts to the study of mean field optimal control (MFC), which are optimization problems in which the system to control is made of a large number of very small parts. The third part of the course will be devoted to the study of mean field games (MFG), which are games in which a large number of very small players are facing each other. The course will be at the meeting point of analysis, measure theory and stochastic calculus.

Compétence à acquérir :

Mode de contrôle des connaissances :

Written exam

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