

February 6<sup>th</sup>, 2017

KAP 414

2:00 P.M. – 3:00 P.M.

## **Professor Dylan Possamai**

(Université Paris Dauphine, France)

### **“An Introduction and Recent Progresses on Principal-Agent Problems”**

**Abstract:** This talk will consist in an overview of recent progresses made in contracting theory, using the so-called dynamic programming approach. The basic situation is that of a Principal wanting to hire an Agent to do a task on his behalf, and who has to be properly incentivized. We will show how this general framework allows to treat volatility control problems arising for instance in delegated portfolio management, in electricity pricing, or in central clearing houses. We will also, if time permits, analyze the situation of a Principal hiring a finite number of Agents who can interact with each other, as well as the associated mean-field problem. All of this is based on joint works with René Aïd (EDF and FIME), Clémence Alasseur, (EDF and FIME) Jakša Cvitanić (CALTECH), Ivar Ekeland (Université Paris Dauphine), Romuald Élie (Université Marne-la-Vallée), Nicolás Hernández Santibáñez (Université Paris Dauphine and Universidad de Chile), Thibaut Mastrolia (Université Paris Dauphine) Anthony Réveillac (INSA Toulouse), Stéphane Villeneuve (TSE) and Nizar Touzi (École Polytechnique).