

Contrôle stochastique et marchés de l'énergie

**ECTS** : 6

**Volume horaire** : 15

**Compétence à acquérir** :

Energy markets are a natural field of applications for stochastic control modelling framework. Historical applications go from water management to the pricing of swing and demand-side contracts. With the deregulation of electricity and gas markets, new applications have raised the attention of financial economists. In particular, the question of the optimal investment in generation assets in the context of climate change and the questions linked to retail competition. These domains are conducive to the utilization of stochastic differential games. This course is intended to provide a short introduction to the physics of energy market and extensive applications taken for financial and economical research papers. For their evaluation, students are expected to realize a study of a research paper for which they will provide a critical analysis of their understanding of the model, together with the reproduction of the results of the paper.

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