



Mean field games, spatial economics, equilibrium and collective decision

This one-day workshop will gather experts with a background in mathematics, economics and physics and will focus on the effects of spatial interactions on individual decisions. Mean-field games, a topic whose mathematical and numerical analysis is very lively now and which is at the frontier between optimization, games, fluid mechanics and equilibrium theory, is a typical example of such questions: how do agents move in a state space when the density of the others affects their cost and dynamics? Spatial externalities in growth models, treated via social optimization or rational expectation equilibria, are another example, as well as traffic, assignment and allocation problems with spatially-dependent costs. All these elements contribute to study collective behavior in many-agents decision theory.

— 9h | 9h30 : WELCOME AND COFFEE

— 9h30 | 10h15 : **Pierre CARDALIAGUET**
CEREMADE, Paris Dauphine University
Mean field games of control and an application to trade crowding

— 10h15 | 11h : **Jean-Michel LASRY**
IFD, Paris Dauphine University
A long-term model for oil industry dynamics

— 11h | 11h30 : COFFEE BREAK

— 11h30 | 12h15 : **Denis ULLMO**
Pascal Institute, University Paris-Saclay
Non-linear Schrödinger approach to mean field games

— 12h15 | 13h : **Ivar EKELAND**
CEREMADE, Paris Dauphine University
The structure of cities

— 13h | 14h : LUNCH

— 14h | 14h45 : **Emmanuelle AUGERAUD-VERON**
GRETHA, University of Bordeaux
Spatial externality and indeterminacy

— 14h45 | 15h30 : **Giorgio FABRI**
GAEL, University of Grenoble
Some recent results on endogenous spatial growth models with linear production function

— 15h30 | 16h : COFFEE BREAK

— 16h | 16h45 : **Athanasios YANNACOPOULOS**
Athens University of Economics and Business
Spatial rational expectations equilibria in neoclassical growth models

— 16h45 | 17h30 : **Alfred GALICHON**
FAS, New York University
Equilibrium transport and spatial allocation problems

Organisateurs : Filippo SANTAMBROGIO (PU, UPSud) , Stefano BOSI (PU, UEVE)

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