Some mean field control problems and associated Hamilton-Jacobi equations

Pierre Cardaliaguet

In this talk I will survey a series of results and ongoing works on the optimal control of particle systems with a large number of particles, their mean field limits and the associated Hamilton-Jacobi (HJ) equations in the space of measures. The particularity of these control problems is that they involve either exit times (and thus HJ equation with Dirichlet boundary conditions) or stopping (and thus quasi-variational inequalities).