

## **On two optimal control problems of Hamilton-Jacobi equations**

This talk is about the optimal control problems of Hamilton-Jacobi equations. The first one appear in Mean field games and is a kind of generalization of optimal transport problems, in which one pays a congestion cost. The surprising feature of the problem is that the optimal solution develops a free boundary separating a region in which the HJ equation becomes elliptic and a region in which it remains of order 1 (joint work with S. Munoz and A. Porretta). The second one appears in traffic flow: one tries to regulate the traffic on a line by acting at a specific point (a junction). One can show that the control is bang-bang, which suggests that, in this context, traffic lights are more efficient than speed limiters (joint work with P. Souganidis).

**Orateur:** CARDALIAGUET, Pierre

**Classification de thématique:** Exposés