

Thursday, Nov. 26 at 9:30 am:

Yann Brenier (Paris, France):

Title: "Structure preservation issues for initial value problems viewed as backward-forward Mean Field Games with matrix-valued density fields"

Abstract:

Backward-Forward systems are very common in control theory and in particular in the theory of Mean Field Games a la Lasry-Lions [sic]. Quite recently, we figured out how the initial value problem for many important PDEs (Burgers, Euler, Hamilton-Jacobi, Navier-Stokes equations, systems of conservation laws with convex entropy, etc...) can be often reduced to a convex minimization problem that can be seen as generalized (variational) MFG involving matrix-valued density fields.

This clearly open the way to many problems of structure preservation at the numerical level.