

Séminaire de Probabilités et Statistique

Mardi 05 Novembre à 14h00

Laboratoire Dieudonné

Salle de réunion Fizeau - LJAD

Giovanni Conforti

CMAP

The mean field Schrödinger problem

Abstract : In this talk we introduce the mean field Schrödinger problem (MFSP), that is the problem of finding the most likely evolution of a cloud of interacting Brownian particles conditionally on observations. In the first part of the talk, starting from the large deviations formulation of MFSP, we will derive a mean field control interpretation and discuss optimality conditions in the form of forward-backward McKean-Vlasov SDEs of planning type. In the second part we present a class functional inequalities for the mean field entropic cost, i.e. the optimal value in MFSP, and show how they can be used to study the ergodic behaviour of mean field control problems.