
ELIAS HESS-CHILDS, New York University

Propagation of chaos from the perspective of perturbation theory

In this talk, I present my recent work on the mean-field behaviour of diffusions in the torus with bounded pairwise interaction. Using a perturbative expansion of the probability density marginals and iterating inequalities derived from the BBGKY hierarchy, I give sharp higher-order corrections to propagation of chaos. Joint work with Keefer Rowan.