April 18th, 2022
Zoom Meeting
2:00 P.M. - 3:00 P.M.

Prof. Zhenjie Ren
(Université Paris-Dauphine, France)

Mean-field Optimization regularized by Fisher Information

Abstract: Recently there is a rising interest in the research of mean-field optimization, in particular because of its role in analysing the training of neural networks. In this talk, by adding the Fisher Information (or, the Schrodinger kinetic energy) as the regularizer, we relate the mean-field optimization problem with a McKean-Vlasov Birth-Death (MVBD) diffusion. We develop a free energy method to show that the marginal distributions of the MVBD process converge towards the unique minimizer of the regularized optimization problem. This is an ongoing joint work with Julien Claisse, Giovanni Conforti and Songbo Wang.

Zoom link:
Topic: USC Math Finance Colloquium
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