

Mean-field optimization problems and non-anticipative optimal transport

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I will present two kinds of mean-field optimization problems that can be studied via non-anticipative optimal transportation. In the first setting we take the point of view of a social planner, who aims at minimizing the average cost of a set of agents, where the cost is composed by an idiosyncratic part depending on each agent's type and action, and a mean-field term depending on the actions distribution over all agents. The second setting deals with the optimal control of stochastic dynamics of McKean-Vlasov type, where the associated cost functional is also of separable nature. These two different settings allow for a similar mathematical analysis, based on dynamic optimal transportation of non-anticipative nature.