1164-49-140 **Wei Yan*** (weiyanum@umich.edu), University of Michigan, Department of Mathematics, East Hall, 530 Church Street, Ann Arbor, MI 48109, and **Jiongmin Yong**. *Mean-field stochastic optimal control with recursive cost functional.*

In this talk, I'm going to talk about a stochastic optimal control problem with both state dynamics and cost functional in mean-field form and the cost functional is defined by a BSDE (backward stochastic differential equation). The problem is motivated mainly by recent results on mean-field optimal control problems and time-inconsistent problems involving conditional expectations. A discussion about the viscosity solution of the corresponding HJB equation will be given. We will also give a description of the optimal control by a necessary condition, which is derived from the HJB equation. (Received January 16, 2021)