Optimal stopping times with different information levels and with time uncertainty

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This paper studies optimal stopping problems for general diffusion processes with an uncertain time horizon and with different levels of information based on which the decision to stop or to continue is made. First, corresponding value functions are compared and related explicitly to their counterparts without the time uncertainty. Second, to analyze optimal stopping strategies, characterization results regarding connectivity of the "stopping" and "continuation" regions are derived. In particular, sufficient conditions for the well-known "threshold type" optimal stopping rule are given, based on which explicit solutions are derived for problems with standard American call/put type payoff functions.

This is a joint work with Xin Guo.

List of invited speakers Schedule for December 14