Connecting singular controls with switching controls, with applications

by
Xin Guo
UC Berkeley
Dept of IEOR,
UC at Berkeley, Berkeley, CA 94720-1777, USA
xinguo@newton.berkeley.edu

Abstract

It was well known that a certain class of singular control problems is connected to optimal stopping problems. In this talk, we present a new theoretical connection between singular control of finite variation and optimal switching problems. This correspondence provides a novel method for solving explicitly multi-dimensional singular control problems, and links singular controls and Dynkin games through sequential optimal stopping.

This is a joint work with P. Tomecek, JP Morgan.