

SEMINÁRIO DO GRUPO DE FÍSICA MATEMÁTICA

Dia 15 de Novembro (quinta-feira), às 14h30, sala 6.2.33

Optimal stopping of switching diffusions with a time-dependent

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Abstract: We address the problem of making a managerial decision when the investment project is subsidized, which results in the resolution of an infinite-horizon optimal stopping problem of a switching diffusion driven by either a homogeneous or an inhomogeneous continuous-time Markov chain. We provide a characterization of the value function (and optimal strategy) of the optimal stopping problem. On the one hand, broadly, we can prove that the value function is the unique viscosity solution to a system of HJB equations. On the other hand, when the Markov chain is homogeneous and the switching diffusion is one-dimensional, we obtain stronger results: the value function is the difference between two convex functions.