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Potential analysis and optimal stopping problems

A variety of stochastics control problems: stopping and impulse control with undiscounted cost functionals depend strongly on an analysis of the properties of potentials. In the talk ergodic control problems will be presented i.e. undiscounted optimal stopping and impulse control with long run average cost functional. Under suitable assumptions on potentials we show that there exist continuous solutions to so called Bellman equations and there are optimal stopping and impulse strategies. The talk will be based on recent papers with Jan Palczewski from Leeds.