Dan GOREAC

University of Paris Est- Marne la Vallée

Title: On Some Discontinuous Control Problems
(joint work with O. Serea)

Abstract: In this talk, we present some results on the discontinuous value function for the Mayer problem without any convexity assumptions on the dynamics. In the deterministic framework, the value function is given with respect to the closure of appropriate reachable sets. In the stochastic case, linear programming formulations are employed. For upper and lower semicontinuous cost functions, we characterize the value function as a (generalized) solution of some associate HJB system. In the stochastic setting, we equally investigate the relations with the weak control formulations under convexity assumptions. We provide counter-examples for general, non-convex dynamics.