

Hamilton-Jacobi-Bellman approach for optimal control problems of sweeping processes

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In this talk, we are concerned with a state-constrained optimal control problem governed by Moreau's sweeping process with a controlled drift. We discuss the Bellman approach for an infinite horizon problem. In particular, we focus on the regularity of the value function and on the Hamilton-Jacobi-Bellman equation it satisfies. We discuss a uniqueness result and we make a comparison with standard state-constrained optimal control problems to highlight a regularizing effect that the sweeping process induces on the value function.

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