

Optimal Control of the Sweeping Process

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ABSTRACT

In this talk, we present recent and new results on the optimal control of Moreau's Sweeping Process (SP). We will present a novel approach for proving a version of the Pontryagin Maximum Principle in a general setting. Such an approach exploits a kind of small-time local controllability property which the SP dynamics naturally satisfies in a neighborhood of the moving constraint. Open problems and further research directions will be extensively discussed.

References

- [1] C. Hermosilla and M. Palladino, *Optimal Control of the Sweeping Process with a Nonsmooth Moving Set*, accepted on SIAM Control and Optimization.