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Title: On Some Recent Results on Impulsive Control Theory

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Abstract: The richer structure of the impulsive control paradigms allows them to be of greater relevance for an increasing number of application scenarii. In this talk, we address a few optimal control theory developments for a general class of impulsive systems whose trajectory well posedness requires the definition of an arc joining the trajectory jump endpoints whenever it occurs. Issues concerning the existence of solutions and necessary conditions of optimality for problems with state and mixed constraints, and, in particular, the issue of nondegeneracy will be addressed.