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# Convex dwell-time characterizations for uncertain linear impulsive systems

Corentin Briat, Alexandre Seuret

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New sufficient conditions for the characterization of dwell-times for linear impulsive systems are proposed and shown to coincide with continuous decrease conditions of a certain class of looped-functionals, a recently introduced type of functionals suitable for the analysis of hybrid systems. This approach allows to consider Lyapunov functions that evolve non-monotonically along the flow of the system in a new way, broadening then the admissible class of systems which may be analyzed. As a byproduct, the particular structure of the obtained conditions makes the method is easily extendable to uncertain systems by exploiting some convexity properties. Several examples illustrate the approach.

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