## **Typical properties of impulsive semiflows**

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## Abstract

Impulsive dynamical systems can be interpreted as mathematical models for real world phenomena that display abrupt changes in their behaviour. An impulsive semiflow is described by three objects: a continuous semiflow on a space X, a set D contained in X where the flow experiments sudden perturbations, and an impulsive function mapping D to X\D which determines the change in the trajectory each time it collides with the impulsive set D. In this way, impulsive semiflows are often discontinuous and need not satisfy some of the basic properties for continuous dynamical systems on compact metric spaces (e.g. existence of invariant measures). In this talk I will illustrate that, despite several examples which show the wilderness of impulsive semiflows, a C^1 typical impulsive semiflow enjoys some features of flows without discontinuities, namely on the existence of plenty of hyperbolic periodic orbits and invariance of the non-wandering set.

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