

# Existence and controllability results for second-order neutral stochastic equations with non-Lipschitz coefficient driven by Rosenblatt process

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## Abstract

In this paper we consider a class of second-order impulsive stochastic functional differential equations driven simultaneously by a Rosenblatt process and standard Brownian motion in a Hilbert space. We prove an existence and uniqueness result under non-Lipschitz condition which is weaker than Lipschitz one and we establish some conditions ensuring the controllability for the mild solution by means of the Banach fixed point principle. At the end we provide a practical example in order to illustrate the viability of our result.

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