

Uniqueness and Stability Results on Non-local Stochastic Random Impulsive Integro-differential Equations

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ABSTRACT

The paper is concerned with the stochastic random impulsive integro-differential equations with non-local conditions. The impulse times considered in this paper are random, despite the existing literature. Initially, a non-local stochastic integro-differential system with the random impulse and finite delay is proposed. Certain preliminaries and notions are considered which are useful for solving the aforementioned proposed system. The sufficient conditions are assumed as assumptions that guarantee the existence and uniqueness of mild solution which are derived using Banach fixed point theorem. Stability of the solution is derived by incorporating Banach fixed point theorem with certain inequality techniques.

Keywords: Existence, Stability, Random impulse, Stochastic Differential Equations.

