

**ON EXISTENCE OF SOLUTION FOR IMPULSIVE PERTURBED QUANTUM
STOCHASTIC DIFFERENTIAL EQUATIONS AND THE ASSOCIATED
KURZWEIL EQUATIONS**

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ABSTRACT

Existence of solution of impulsive Lipschitzian quantum stochastic differential equations (QSDEs) associated with the Kurzweil equations are introduced and studied. This is accomplished within the framework of the Hudson-Parthasarathy formulation of quantum stochastic calculus and the associated Kurzweil equations. Here again, the solutions of a QSDE are functions of bounded variation, that is they have the same properties as the Kurzweil equations associated with QSDEs introduced in [1, 4]. This generalizes similar results for classical initial value problems to the noncommutative quantum setting.

KEYWORDS: Impulsive, Kurzweil Equations, Bounded Variation, Noncommutative Stochastic Processes