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Impulsive Stochastic Fractional Integro-differential Inclusions with State-Dependent Delay

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Abstract :

This work is concerned with the existence of mild solutions for impulsive fractional order stochastic integro-differential inclusions with state-dependent delay. The existence result is obtained by using the fixed point technique on a Hilbert space. At last, we present an example to verify the result.

Keywords : Impulsive conditions, Caputo fractional derivative, mild solution, fixed point, Stochastic integro-differential equations, Hilbert space.

Mathematics Subject Classification: 26A33, 34A37, 34G25, 34K50, 60H10.

References

- S. Abbas, M. Benchohra and G.M. N'Guérékata, *Topics in Fractional Differential Equations*, Springer, New York, (2012).
- [2] S. Abbas, M. Benchohra and G.M. N'Guérékata, Advanced Fractional Differential and Integral Equations, Nava Science Publishers, New York, (2015).
- [3] A. Chadha, D. Bahuguna and D.N. Pandey, Existence of a mild solution for a neutral stochastic fractional integro-differential inclusion with a nonlocal condition. Journal of Integral Equations and Applications, 30, 257–291, (2018).
- [4] T. Guendouzi and O. Benzatout, Existence of solutions for fractional partial neutral stochastic functional integro-differential inclusions with state-dependent delay and analytic resolvent operators, Viet. J. Math., 43, 687–704, (2015).
- [5] A. A. Kilbas, Hari M. Srivastava, and Juan J. Trujillo, Theory and Applications of Fractional Differential Equations. Elsevier Science B.V., Amsterdam, (2006).
- [6] V. Lakshmikantham, D.D. Bainov and P.S. Simeonov, Theory of Impulsive Differential Equations, World Scientific, NJ, (1989).