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**Approximate Controllability of Hilfer Fractional Sobolev Type Integrodifferential Inclusions with Nonlocal Conditions**

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**Abstract**

In this paper, we investigate approximate controllability of Hilfer fractional Sobolev type differential inclusions with nonlocal conditions. The main techniques rely on the fixed point theorem combined with the semigroup theory, fractional calculus and multivalued analysis. An example is provided to illustrate the obtained results.

**Keywords:**

A[pproximate controllability](https://www.inderscienceonline.com/keyword/Approximate%2BControllability), [Hilfer fractional derivative](https://www.inderscienceonline.com/keyword/Hilfer%2BFractional%2BDerivative), [Sobolev type differential inclusions](https://www.inderscienceonline.com/keyword/Sobolev%2BType%2BDifferential%2BInclusions), [Semigroup theory](https://www.inderscienceonline.com/keyword/Semigroup%2BTheory)

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