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Controllability of Fractional Integro-Differential Equations with Delays and Singular Kernels in Fréchet Spaces

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Abstract

In this talk, we investigate existence and approximate controllability results for a class of fractional integro-differential equations formulated in Fréchet spaces. The analysis is carried out using a generalized version of Darbo's fixed point theorem adapted to Fréchet spaces, combined with the concept of the measure of noncompactness. To demonstrate the validity and applicability of the theoretical findings, an illustrative example is presented.

Mathematics Subject Classification : 47H08, 34K30, 93C20, 45J05.

Keywords : Fractional Integro-Differential Equations; mild solution; semigroup; Fréchet space; controllability; Singular Kernels.

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