Vivek, D.; Sivasundaram, Seenith; Kanagarajan, K.
Studies on continuous dependence solutions for pantograph equations with $\psi$-Hilfer fractional derivative. (English) Zbl 07222354
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Summary: In this paper, we establish the existence and continuous dependence of solutions of nonlocal fractional pantograph equations involving the $\psi$-Hilfer derivative. Our argument uses Krasnoselskii’s fixed point theorem, on the space of weighted continuous functions.

MSC:
34K37 Functional-differential equations with fractional derivatives
34K05 General theory of functional-differential equations

Keywords:
pantograph equation; $\psi$-fractional derivative; existence; continuous dependence; Gronwall’s inequality

Full Text: Link