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EXISTENCE AND UNIQUENESS SOLUTIONS OF FRACTIONAL INTEGRO-DIFFERENTIAL EQUATIONS WITH INFINITE POINT CONDITIONS

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Abstract: In this article, we prove the existence of solutions of fractional integro-differential equations with infinite point conditions by using fractional calculus and fixed point theorems. Further continuous dependence on initial point, on nonlocal data, on the functional is also studied. Finally, the obtained results are verified with the help of some examples.

Keywords and Phrases: Functional-differential equations with fractional derivatives, Nonlinear differential equations in abstract spaces, Initial value problems, Fixed point theorems.

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1. Introduction

The subject of fractional calculus and fractional differential equations is a rapidly growing area of mathematics. There are many applications of this subject in many field such as engineering, viscoelasticity, economics and biological