

Cauchy problems of fractional evolution equations on an infinite interval

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Abstract

In this paper, we investigate the existence and attractivity of mild solutions to fractional evolution equations with Caputo fractional derivative on an infinite interval. Our methods are based on fractional calculus, semigroup theory, compactness methods and the measure of noncompactness. Several sufficient conditions for the existence of solutions to the given problem are proposed. Examples illustrating the main results are presented.

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