

Finite-time attractivity of solutions for a class of fractional differential inclusions with finite delay

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Abstract

Our aim in this paper is to give a sufficient condition ensuring the finite-time attractivity for the zero solution to semilinear functional differential inclusions in Banach spaces, in the case where the nonlinearity function possibly has superlinear growth. Our analysis is based on the semigroup theory, the fixed point principle for condensing multi-valued maps, and local estimates of solutions. The abstract results will be applied to a class of polytope inclusions in C_0 setting.

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