GLOBALLY ATTRACTIVE MILD SOLUTIONS
FOR NON-LOCAL IN TIME SUBDIFFUSION EQUATIONS
OF NEUTRAL TYPE

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Abstract. We prove the existence of at least one globally attractive mild solution to the equation

$$\partial_t(b * [x - h(\,\cdot\,, x(\,\cdot\,))])(t) + A(x(t) - h(t, x(t))) = f(t, x(t)), \quad t \geq 0,$$

under the assumption, among other hypothesis, that A is an almost sectorial operator on a Banach space X and the kernel b belongs to a large class, which covers many relevant cases from physics applications, in particular the important case of time- fractional evolution equations of neutral type.

1. Introduction

Existence of globally attractive solutions for mathematical models is a very challenging topic that is drawing the attention of many researchers in the last decade. For instance, Alzabut and Abdeljawad in [1] studied the existence of a globally attractive periodic solutions of an impulsive delay logarithmic population model. Bartuccelli, Deane and Gentile [3] analyzed globally and locally attractive solutions for quasi-periodically forced systems, and Li and Cheng [8] established conditions for the existence of globally attractive periodic solutions

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