

Weighted pseudo-almost automorphic solutions for some partial functional differential equations

Boukli-Hacene Nadira; Ezzinbi Khalil

Abstract :

In this paper, we study the existence and uniqueness of a weighted pseudo-almost automorphic solution for some nonhomogeneous partial functional differential equations. We use the variation of constants formula developed in Ezzinbi and N'Guérékata (2007) [11] and the spectral decomposition of the phase space to show the main result of this work. To illustrate our main result, we study the existence and uniqueness of a weighted pseudo-almost automorphic solution for some diffusion equations with delay.

Keywords : Partial functional differential equation; Hyperbolic semigroup; Weighted pseudo-almost automorphic solution.

Journal Title / Revue : Nonlinear Analysis: Real World Applications, ISSN : 1468-1218, DOI : 10.1016/j.nonrwa.2010.06.040, Issue : 1, Volume : 12, pp. 562–570, February 2011.