## Stepanov pseudo almost periodic functions and applications

Kamal Khalil<sup>1</sup>, Marko Kostic<sup>2</sup>, and Manuel Pinto<sup>3</sup>

<sup>1</sup>Cadi Ayyad University Faculty of Sciences Semlalia <sup>2</sup>University of Novi Sad Faculty of Technical Sciences <sup>3</sup>Universidad de Chile Facultad de Ciencias Fisicas y Matematicas

November 10, 2020

## Abstract

In this work, we present basic results and applications of Stepanov pseudo almost periodic functions with measure. Using only the continuity assumption, we prove a new composition result of  $\sum e^{1} e^{1}$  muspective and inclusions in Stepanov sense. Moreover, we present different applications to semilinear differential equations and inclusions in Banach spaces with weak regular forcing terms. We prove the existence and uniqueness of  $\sum e^{1} e^{1}$  muspectively, provided that the nonlinear forcing terms are only Stepanov  $\sum e^{1} e^{1}$  muspect to the second argument. Some examples illustrating our theoretical results are also presented.

## Hosted file

KhKoPi\_20.pdf available at https://authorea.com/users/374521/articles/492058-stepanov-pseudo-almost-periodic-functions-and-applications

## Hosted file

KhKoPi\_20.tex available at https://authorea.com/users/374521/articles/492058-stepanov-pseudo-almost-periodic-functions-and-applications