

HYBRID-TYPE OF FIXED-SET RESULTS IN BANACH ALGEBRAS INVOLVING THE SUM AND THE PRODUCT OF MULTI-VALUED MAPPINGS UNDER WEAK TOPOLOGY

KHaled Ben Amara¹, Aref JERIBI¹, and najib Kaddachi¹

¹University of Sfax Faculty of Sciences of Sfax

May 6, 2020

Abstract

In this manuscript, by means of the technique of measures of weak noncompactness, we prove some fixed set results for the sum and the product of $(p+1)$ multi-valued mappings $P_{p \ i=1} A \ B_i$; acting on Banach algebras satisfying a certain sequential condition (P) under weak topology. In addition, by using a new definition of the multi-valued mapping $I \ A$; we get new fixed set theorems for the mappings of the form $I \ A \ 1 \ P_{n \ i=1} B_i$ under some suitable conditions on the operators $A; B_1; : : : ; B_p$ in Banach algebras. Applications to the theory of self-similarity are also given.

Hosted file

Somme $A \ B_i \ (1) \ (1).$ pdf available at <https://authorea.com/users/317330/articles/447435-hybrid-type-of-fixed-set-results-in-banach-algebras-involving-the-sum-and-the-product-of-multi-valued-mappings-under-weak-topology>