



Norm continuity of weakly quasi-continuous mappings

Alireza Kamel Mirmostafaei

Center of Excellence in Analysis on Algebraic Structures,
Department of pure Mathematics, Ferdowsi University of Mashhad,
P. O. 1159 Mashhad, Iran
E-mail:mirmostafaei@ferdowsi.um.ac.ir

Abstract

Let \mathcal{Q} be the class of Banach spaces X for which every weakly quasi-continuous mapping $f : A \rightarrow X$ defined on an α -favorable space A is norm continuous at the points of a dense G_δ subset of A . We will show that this class is stable under c_0 and ℓ^p -sums of Banach spaces for $1 \leq p < \infty$.

1 Introduction

In 1974, I. Namioka [16] proved that every weakly continuous mapping f from a countably Čech-complete space A into a Banach space X is norm continuous at the points of a dense G_δ subset of A . It was conjectured that Namioka's result remains valid for any α -favorable space A . However, in 1985, M. Talagrand [19] gave an example of a weakly continuous nowhere norm continuous mapping defined on an α -favorable space. Therefore the following problem naturally arises:

Under what conditions on a Banach space X , every weakly quasi-continuous mapping from an α -favorable A into X is norm continuous at each point of a dense G_δ subset of A ?

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