

Brzdęk, Janusz; Ciepliński, Krzysztof

A fixed point theorem and the Hyers-Ulam stability in non-Archimedean spaces. (English)

Zbl 1286.47049

J. Math. Anal. Appl. 400, No. 1, 68-75 (2013).

In this paper, a fixed point theorem in complete non-Archimedean normed space is proved. As an application, the Hyers-Ulam stability of some functional equations is proved. Examples are provided for Hyers-Ulam stability of functional equations in several variables.

Reviewer: [Bhavana Deshpande \(Ratlam\)](#)

MSC:

47S10 Operator theory over fields other than \mathbb{R} , \mathbb{C} or the quaternions; non-Archimedean operator theory

47H10 Fixed-point theorems

39B82 Stability, separation, extension, and related topics for functional equations

Cited in **12** Documents

Keywords:

non-Archimedean normed space; fixed point; Hyers-Ulam stability; linear functional equation; square symmetric groupoid

Full Text: [DOI](#)