APPLICATIONS OF FIXED POINT THEOREMS TO THE HYERS–ULAM STABILITY OF FUNCTIONAL EQUATIONS – A SURVEY

KRZYSZTOF CIEPLIŃSKI

Communicated by M. S. Moslehian

ABSTRACT. The fixed point method, which is the second most popular technique of proving the Hyers–Ulam stability of functional equations, was used for the first time in 1991 by J.A. Baker who applied a variant of Banach's fixed point theorem to obtain the stability of a functional equation in a single variable. However, most authors follow Radu's approach and make use of a theorem of Diaz and Margolis. The main aim of this survey is to present applications of different fixed point theorems to the theory of the Hyers–Ulam stability of functional equations.

INSTITUTE OF MATHEMATICS, PEDAGOGICAL UNIVERSITY, PODCHORĄŻYCH 2, 30-084 KRAKÓW, POLAND.
E-mail address: kc@up.krakow.pl