STABILITY OF A PEXIDER TYPE FUNCTIONAL EQUATION RELATED TO DISTANCE MEASURES

Gwang Hui Kim and Prasanna K. Sahoo

Abstract. This work aims to study of the stability of two generalizations of the functional equation \( f(pr,qs) + f(ps,qr) = f(p,q)f(r,s) \), namely (i) \( f(pr,qs) + g(ps,qr) = h(p,q)h(r,s) \), and (ii) \( f(pr,qs) + g(ps,qr) = h(p,q)k(r,s) \) for all \( p,q,r,s \in G \), where \( G \) is a commutative semigroup. Thus this work is a continuation of our earlier works [15] and [16], and the functional equations studied here arise in the characterizations of symmetrically compositive sum form distance measures.


Keywords and phrases: Stability, superstability, functional equation, multiplicative function.

REFERENCES


