

Khan, A.R.^{a d}, Domlo, A.A.^b, Hussain, N.^c

Coincidences of lipschitz-type hybrid maps and invariant approximation

(2007) *Numerical Functional Analysis and Optimization*, 28 (9-10), pp. 1165-1177. Cited 5 times.

^a Department of Mathematical Sciences, King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia

^b Department of Mathematics, Taibah University, Madinah Munawarah, Saudi Arabia

^c Department of Mathematics, Faculty of Science, King Abdul Aziz University, Jeddah, Saudi Arabia

^d Department of Mathematical Sciences, King Fahd University of Petroleum and Minerals, Dhahran 31261, Saudi Arabia

Abstract

The aim of this paper is to obtain new coincidence and common fixed point theorems by using Lipschitz-type conditions of hybrid maps (not necessarily continuous) on a metric space. As applications, we demonstrate the existence of common fixed points from the set of best approximations. Our work sets analogues, unifies and improves various known results existing in the literature.

Author Keywords

Best approximation; Coincidence point; Common fixed point; Eigenvalue; Lipschitz condition; Metric space; Weak commutativity; Weakly compatible maps

Document Type: Article