

Some Remarks on Mappings Satisfying Cyclical Contractive Conditions

Zaid Mohammed Fadail¹, Abd Ghafur Bin Ahmad²,
Stojan Radenović³ and Miloje Rajović⁴

^{1,2} School of Mathematics Sciences, Faculty of Science and Technology
Universiti Kebangsaan Malaysia, 43600 UKM Bangi
Selangor Darul Ehsan, Malaysia

³ Faculty of Mathematics and Information Technology, Teacher Education
Dong Thap University, Cao Lanch City, Dong Thap Province, Viet Nam

⁴ Faculty of Mechanical Engineering, Dositejeva19, 36000, Kraljevo, Serbia

Copyright © 2015 Zaid Mohammed Fadail et al. This article is distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Abstract

In this paper, we consider, discuss and complement fixed points results for mappings satisfying cyclical contractive conditions established by W. A. Kirk et al. [W. A. Kirk, P. S. Srinivasan, P. Veeramani, Fixed points for mappings satisfying cyclical contractive conditions, Fixed Point Theory, Volume 4, No. 1, 2003, 79-89]. By using our new Lemma we get much shorter and nicer proofs of some results with the new concept of mappings.

Mathematics Subject Classification: 54H25, 47H10

Keywords: Cyclic type contractions, Fixed point theorem; Geraghty's type theorem; Boyd-Wong theorem, Edelstein's theorem, Caristi's type theorem

1 Introduction and preliminaries

It is well known that the Banach contraction principle is one of the fundamental result in nonlinear analysis and fixed point theory, in general. It has various appli-

