Periodic point results on orthogonal cone metric space

N.B. Gungor[1], D. Turkoglu[2]

[1] *Amasya University, Amasya, Turkey, nurcan.bilgili@amasya.edu.tr*
[2] *Gazi University, Ankara, Turkey, dturkoglu@gazi.edu.tr*

Abstract

In 2007, Huang and Zhang [3] introduced cone metric spaces and proved some fixed point theorems of contractive mappings on cone metric spaces. Then many researchers are obtained fixed point theorems on cone metric spaces.

On the other hand, in 2017, Gordji et al [2] described the notion of orthogonal set and orthogonal metric spaces. Generalizations of theorems in this field have been considered in some research articles.

Very recently, Bilgili Gungor [1] presented new concepts of orthogonal cone metric spaces, orthogonal completeness and orthogonal continuity. Also, fixed points of orthogonal contractions are investigated by Bilgili Gungor. In this work, periodic points of self mappings which are defined on orthogonal cone metric spaces are investigated.

Key Words: Orthogonal cone metric, Fixed points, Periodic points.

References

[1] N.B. Gungor, Orthogonal cone metric spaces and fixed points of orthogonal contractions, Journal of Fixed Point Theory and Applications (In review).

[2] M.E. Gordji, M. Ramezani, M. De La Sen, Y.J. Cho, On orthogonal sets and Banach fixed point theorem, Fixed Point Theory, 18 (2017), 569-578.

[3] L.G. Huang, X. Zhang, Cone metric spaces and fixed point theorems of contractive mappings, Journal of mathematical Analysis and Applications, 332 (2007), 1468-1476.