ON PERFECTLY α-IRRESOLUTE FUNCTIONS

IDRIS ZORLUTUNA

Abstract. In this paper, some results concerning properties of perfectly α-irresolute functions and their relationships with other types of functions between topological spaces are obtained. Some new characterizations of connected spaces are given by using perfectly α-irresolute functions, and behaviour of some α-separation axioms under perfectly α-irresoluteness are investigated.

MSC 2010. 54C08, 54C10.

Key words. α-open, perfectly α-irresolute function, α-irresolute function

REFERENCES

[1] Arya, S.P. and Gupta,R., *On strongly continuous mappings*, Kyungpook Math. J., **14** (1974), 131–143.

[2] Beceren, Y. and Noiri, T., *On α-precontinuous functions*, Far East J. Math. Sci. (FJMS), Special Volume Part III (2000), 295–303.

[3] Caldas, M.,Jafari S.,Noiri,T. and Saraf, R.K., *Weak and strong forms of α-irresolute maps*, Chaos Solitons Fractals, **24** (2005), 223–228.

[4] Chae, G.I., Noiri, T. and Kim, J.S., *On slightly α-continuous functions*, East Asian Math. J., **19** No.2 (2003), 241–249.

[5] Devi, R., Balachandran, K. and Maki, H., *Generalized α-closed maps and generalized α-closed maps*, Indian J. Pure Appl. Math., **29** (1) (1998), 37–49.

[6] Jafari, S. and Noiri, T., *Contra α-continuous functions between topological spaces*, Iranian Int. J. Sci., **2**(2) (2001), 157–167.

[7] Jafari, S., *Rare α-Continuity*, Bull. Malaysian Math. Soc. **28** (2) (2005), 157–161.

[8] Lo Faro, G., *On strongly α-irresolute mappings*, Indian J. Pure. Appl. Math., **2**(18) (1987), 146–151.

[9] Maheshwari, S.N. and Thakur, S.S., *On α-irresolute mappings*, Tamkang J. Math., **11** (1980), 209–214.

[10] Maheshwari, S.N. and Thakur, S.S., *On α-compact spaces*, Bull. Inst. Sinica, **13** (1985), 341–347.

[11] Maki, H., Devi, R. and Balachandran, K., *Generalized α-closed sets in Topology*, Bull. Fukuoka Uni. Ed. Part. III, **42** (1993), 13–21.

[12] Mashhour, A.S., Abd El-Monsef, M.E. and El-Deeb, S.N., *On precontinuous and weak precontinuous functions*, Proc. Math. Phys. Soc. Egypt., **53** (1982), 47–53.

[13] Mashhour, A.S., Hasanein, I.A. and El-Deeb, S.N., *α-continuous and α-open mappings*, Acta Math. Hungar., **41** (1983), 213–218.

[14] Navalagi, G.B., *On completely α-irresolute functions*, Topology Atlas, preprint 2001.

[15] Navalagi, G.B., *Some weak forms of normality*, unpublished.

[16] Nieminen, T., *On ultrapseudocompact and related topics*, Ann. Acad. Sci. Fenn. Ser. A I Math., **3** (1977), 185–205.

[17] Njastad, O., *On some classes of nearly open sets*, Pacific J. Math., **15** (1995), 961–970.

[18] Noiri, T., *Super continuity and some strong forms of continuity*, Indian J. Pure Appl. Math., **15** (3) (1984), 241–250.

[19] Noiri, T. and Di Maio, D., *Properties of α-compact spaces*, Suppl. Rend Circ. Mat. Palermo, **2** (18) (1988), 359–369.

[20] Staum, R., *The algebra of bounded continuous functions into a non archimedian field*, Pacific J. Math., **50** (1974), 169–185.

[21] Steen, L.A. and Seebach, J.A. Jr, *Counterexamples in topology*, Holt, Rinehart and Winston, New York, 1970.

[22] Zorlutuna, I., *On strong forms of completely irresolute functions*, Chaos Solitons Fractals, **38** (2008), 970–979.

Cumhuriyet University

Faculty of Science

Department of Mathematics

58140 Sivas, Turkey

E-mail: `izorlu@cumhuriyet.edu.tr`