

ON  $w\mathcal{I}_g$ -CLOSED SETS IN WEAK STRUCTURE SPACES  
DUE TO CSÁSZÁR WITH IDEALS

AHMAD AL-OMARI and TAKASHI NOIRI

**Abstract.** In this paper, we define and investigate the notions of  $wg$ -closed sets in a weak structure space  $(X, w)$  due to Császár and of  $w\mathcal{I}_g$ -closed sets in an ideal weak structure space  $(X, w, \mathcal{I})$ .

**MSC 2010.** 54A05, 54C10.

**Key words.** Weak structure, ideal space,  $wg$ -closed set,  $w\mathcal{I}_g$ -closed set.

REFERENCES

- [1] AL-OMARI, A., NOIRI, T. and AL GHOUR, S., *A topology induced by weak structures due to Császár and ideals*, An. Ştiinţ. Univ. Al. I. Cuza Iaşi. Mat. (N.S.), **61** (2015), 355–367.
- [2] AL-OMARI, A. and NOIRI, T., *Weak separation axioms  $w\text{-}R_0$  and  $w\text{-}R_1$  in weak structures due to Császár*, Southeast Asian Bull. Math., **40** (2016), 15–22.
- [3] CSÁSZÁR, Á., *Generalized topology, generalized continuity*, Acta Math. Hungar., **96** (2002), 351–357.
- [4] CSÁSZÁR, Á., *Weak structures*, Acta Math. Hungar., **131** (2011), 193–195.
- [5] JANKOVIĆ, D. and HAMLETT, T.R., *New topologies from old via ideals*, Amer. Math. Monthly, **97** (1990), 295–310.
- [6] KURATOWSKI, K., *Topology I*, Academic Press, New York, 1966.
- [7] MAKI, H., UMEHARA, J. and NOIRI, T., *Every topological space is  $\text{pre-}T_{\frac{1}{2}}$* , Mem. Fac. Sci. Kochi. Univ. Ser. A Math., **17** (1996), 33–42.
- [8] OZBAKIR, O.B. and YILDIRIM, E.D., *On some closed sets in ideal minimal spaces*, Acta Math. Hungar., **125** (2009), 227–235.
- [9] VAIDYANATHASWAMY, R., *Set Topology*, Chelsea Publishing Company, New York, 1960.

Received January 23, 2015

Accepted July 8, 2016

*Al al-Bayt University*  
*Department of Mathematics*  
*P.O. Box 130095, Mafraq 25113, Jordan*  
*E-mail: omarimutah1@yahoo.com*

*2949-1 Shiokita-cho, Hinagu*  
*Yatsushiro-shi, Kumamoto-ken*  
*869-5142 Japan*  
*E-mail: t.noiri@nifty.com*