

# I-WARD CONTINUITY

SETENAY AKDUMAN

A non-empty collection of subsets of a set  $\mathbf{X}$  which is closed under the operations of subset and finite unions defines an ideal on  $\mathbf{X}$ . The concept of I-convergence of sequences of real numbers based on the notion of the ideal of subsets of  $\mathbf{N}$  has been introduced in [1]. Then this concept has been extended to topological space and topological groups as in the studies [2] and [6].

This paper comes from the concept of  $N_\theta$ -convergence which is introduced in [3] and the concept of ideal convergence developed in some papers such as [4] and [5]. In the study [3], a new kind of continuity and a new kind of compactness have been introduced, namely,  $N_\theta$ -ward continuity and  $N_\theta$ -ward compactness. The concept of I-convergence encourage us to approach to these new type of convergence and compactness. This concept also has been studied on topological groups by [6].

The purpose of this study is to generalize some studies on new kinds of continuities and compactness to ideals. And also we will examine the concept of I-convergence in topological groups to extend some previous studies.

## REFERENCES

- [1] KOSTYRKO P. , MACAJ M. , SALAT T. , *Statistical convergence and I-convergence*, Real Analysis Exch., submitted.
- [2] LAHIRI B. K. AND DAS P. , *I and I\*-convergence in topological spaces*, Mathematica Bohemica 130 (2) (2005), 153-160.
- [3] ÇAKALLI, H. ,  *$N_\theta$ -ward continuity*, In Abstract and Applied Analysis, volume 2012, Hindawi Publishing Corporation.
- [4] KOSTYRKO, P. , WILCZYNSKI, W. , AND SALAT T. , *I-convergence* , Real Analysis Exchange, (2000), 26(2):669-686.
- [5] BALAZ, V. , CERVENANSKY, J. , KOSTYRKO, P. , AND SALAT, T. , *I-convergence and I-continuity of real functions*, Acta Mathematica, Faculty of Natural Sciences, Constantine the Philosopher University Nitra, (2002), 5:43-50.
- [6] HAZARIKA, B. , *On ideal convergence in topological groups*, Scientia Magna (International Book Series, Vol. 7, No. 4, (2011), 7(4):42-48.

FACULTY OF SCIENCE, DEPARTMENT OF MATHEMATICS, DOKUZ EYLUL UNI-  
VERSITY, IZMIR, TURKEY  
*E-mail address:* [setenayakduman@gmail.com](mailto:setenayakduman@gmail.com)