

ON \mathcal{I} -CONVERGENCE IN RANDOM 2-NORMED SPACES

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ABSTRACT. Recently the concepts of statistical convergence and ideal convergence have been studied in 2-normed and 2-Banach spaces by various authors. In this paper we define and study the notion of ideal convergence in random 2-normed space and construct some interesting examples.

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1. Introduction and preliminaries

The idea of statistical convergence was introduced by Fast [4] and since then several generalizations and applications of this concept have been investigated by various authors. One of its generalizations is the ideal convergence or I -convergence which was introduced by Kostyrko et al [11] and studied by Balcerzak et al [2], Das et al [3], and Komisarski [12]. Recently, Karakus [10] studied the concept of statistical convergence in probabilistic normed spaces.

The theory of probabilistic normed spaces was initiated and developed in [1], [14], [18], [19] and further it was extended to random/probabilistic 2-normed spaces [8] by using the concept of 2-norm [7].

Recently, statistical convergence and I -convergence have been studied in 2-Banach and 2-normed spaces in [9] and [17]. In this paper we define and study I -convergence in random 2-normed space which is quite a new and interesting idea to work with. For the study of statistical convergence and I -convergence of double sequences we refer to [3], [13], [15] and [16].

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