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A NOTE ON ROUGH IDEAL CONVERGENCE OF DOUBLE SEQUENCES

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Abstract: In this article, we invent the notion of rough ideal convergence of double sequence spaces in neutrosophic normed spaces. We investigate some of its topological and algebraic properties of the newly defined concept in neutrosophic normed spaces. We reveal some characterization theorems of it in neutrosophic normed spaces. We also establish its relationships with other known sequence spaces.

Keywords and Phrases: Ideal convergence, rough convergence, double sequence space, neutrosophic normed space.

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1. Introduction

Classical methods often fail to solve real-life problems due to uncertainties. To address such situations, Zadeh [21] introduced the notion of fuzzy set theory, which incorporates only membership values. Thereafter, Atanassov [1] extended this concept by developing intuitionistic fuzzy set theory, which uses both membership and non-membership values.