ON FIBONACCI DIFFERENCE IDEAL CONVERGENT SEQUENCE SPACES OF FUZZY REAL NUMBERS

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Abstract. In this paper, we introduce and study new sequence spaces of fuzzy real numbers using the concept of I-convergence. Specifically, we define I-convergence and I-Cauchy conditions for Fibonacci difference sequence spaces of fuzzy real numbers. We introduce the sequence spaces $_Fc^I(\hat{F})$, $_Fc_0^I(\hat{F})$, and $_F\ell_\infty^I(\hat{F})$ and examine their topological and algebraic properties. Furthermore, we investigate the relationships between these sequence spaces and provide a detailed analysis of their structure. This work offers a fresh perspective on sequence spaces in the context of fuzzy real numbers and I-convergence, extending the existing theory with new results and applications.