IDEALS IN FUZZY TOPOLOGY ON FUZZY SPACES

By

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ABSTRACT

This thesis extends the concept of an ideal and its applications in the L-fuzzy space. New topological spaces on L-fuzzy spaces are generated by a given topological spaces on L-fuzzy spaces and a given ideal in different forms. Also, many properties and relations are introduced.

The thesis consists of an introduction, four chapters, a list of references and an English and Arabic summaries as follows:

The introduction:

It includes a quick hint for the purpose of this thesis and its contents.

Chapter1:

This chapter is considered as a background for the basic materials of ideals in topological spaces, compatibility of τ with I, the general properties of Natkaniec operator ψ, classical fuzzy ideal theory, L-fuzzy spaces, topological structure on L-fuzzy space and separation axioms.

Chapter2:

In this chapter we have studied the ideals on L-fuzzy spaces, local function and its properties, generated fuzzy topology and relations.

Chapter3:

In this chapter, we have studied the open L-fuzzy subspaces of the generated fuzzy topology, compatibility of the topology with the ideal on L-fuzzy space and weak compatibility.

Chapter4:

In this chapter, we will define and study the fundamental properties of the operator ψ and its applications and L-fuzzy separation axioms.