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CONNECTIVITY BETWEEN DOOR AND IDEAL SPACES VIA INTUITIONISTIC PERSPECTIVE

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(Dedicated to Professor Maximilian Ganster on the occasion of his retirement)

Abstract. In this paper we present a new concept of intuitionistic door space. We prove that Intuitionistic α-open sets does not form intuitionistic topology. We first discuss several properties of intuitionistic door space. Next, we give some interesting characterizations of intuitionistic continuity. Finally, we obtain the connections between intuitionistic door space and intuitionistic ideal door space.

1. Introduction

The concept of intuitionistic fuzzy sets was introduced by Krassimir T. Atanassov [9]. The classical version of this concept was introduced by Coker [4]. He studied the topology on intuitionistic sets [5]. Several characterizations of door space were presented by Dontchev [8]. The submaximal intuitionistic topology was defined by Ozcelik and Narli [1].

In section 1, we studied door space, continuity, ideal in the context of intuitionistic topological space(ITS). In section 2, we have given preliminaries for ITS. In section 3, we have proved that intuitionistic α-open sets not necessarily form ITS. Intuitionistic continuous function in intuitionistic door space is given in section 4. We have given an example for the case which an intuitionistic door space is intuitionistic semi door space but not for the converse case. Intuitionistic continuous image of intuitionistic door space is not necessarily an intuitionistic door space. In section 5, intuitionistic ideals in intuitionistic door space is discussed.