

ON NEAR CONTINUITY FOR MINIMAL STRUCTURES

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Abstract

The purpose of this paper is to introduce four kinds of near continuity for functions defined on minimal spaces. Basic properties and characterizations are established for such functions. We also define new minimal structures related to these near continuities. In this way, we obtain many well known results already in the literature, as special cases.

Keywords: Minimal structures, M -continuity, m -continuity, c - M -continuity, c - m -continuity, l - M -continuity, l - m -continuity, Co- m -compact, Co- m -Lindelöf.

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1. Introduction

In the literature, there are a large number of papers including notions of near continuity, for example almost continuity [19, 23], H -continuity [15], c -continuity [9, 14, 16], almost c -continuity [20, 24], l -continuity [12], almost l -continuity [13], kc -continuity [10] and lc -continuity [11]. In each of these cases the definition of near continuity is equivalent to requiring continuity of the function when the range space is retopologised in a certain way. Some well known examples of these new topologies can be given as; cocompact [7], coLindelöf [8], almost coLindelöf [13], co KC [10] and co LC [11] topologies which define the continuity of a c -continuous, l -continuous, almost l -continuous, kc -continuous and lc -continuous function, respectively.

In this paper, we introduce some near continuities for functions between minimal spaces, namely c - M -continuity, l - M -continuity, c - m -continuity and l - m -continuity. We also define minimal structures related to these near continuities, called co- m -compact and co- m -Lindelöf structures, which are generalizations of cocompact and coLindelöf topologies, in the classical sense, respectively.

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