Some Results Related with Coarse Space, Coarse Map and Coarse Equivalent

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Abstract

Mathematical field of geometry and topology a coarse structure on a set X is the collection of subsets of the Cartesian product $X \times X$ with certain properties which allow the large scale structure of metric and topological space to be defined. To concern of traditional geometry and topology is with the small scale structure of the space properties such as continuity of a function depend on whether the inverse image of small open sets, neighborhood are themselves open. Large scale properties of a space such as boundedness or degree of freedom do not depend on such features. The objective of this paper is to establish some results which are related with coarse space, coarse map and coarse equivalent. We can verify that the bounded coarse structure, two metric spaces are equivalent and also inclusion map is coarse map.

Keywords - Coarse space, Coarse map, Coarse equivalent