

TOPOLOGIES COMPATIBLE WITH THE CONNECTIVITY IN NETWORKS

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Abstract. In a 2ε -network over an ε -network in a totally bounded metric space the topological property of connectivity by means of arcs is described. A necessary and sufficient condition for the existence of a topology on the 2ε -network such as the connectivity in topology should be equivalent with the connectivity by means of arcs is proved. Many more examples of connectivities taken from 2D and 3D image analysis are studied according to the possibility of deriving them from a topology.

Keywords. v -connectivity, topology compatible with the v -connectivity.