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Well-chainedness and connectedness. (English)

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Summary: A unified treatment of some old and new well-chainedness and connectedness properties of the most basic topological structures (such as closures, proximities and uniformities, for instance) is offered in the framework of relators (families of binary relations) and their fundamental refinements.

The results obtained show that the various connectedness properties are actually particular cases of Cantor's well-chainedness property neglected by several authors. Moreover, they show that the hyperconnectedness introduced by *L. A. Steen* and *J. A. Seebach* [Counterexamples in topology, Springer (1970; Zbl 0211.54401)] is a particular case of our paratopological connectedness.

Keywords : operations on relators; relational systems; well-chainedness and connectedness properties of relators; hyperconnectedness

Classification :

*54D05 Connectedness (general aspects)

54A05 Topological spaces and generalizations