A Topological Theory of (T,V)-Categories

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Abstract.

Following the development of L-completeness and L-separation for (T,V)-categories by Hofmann & Tholen we introduce the notions of L-complete & L-separated (T,V)-functors. We examine their properties and show that they belong to a factorization structure on (T,V)-Cat. We also explore some important relativized topological concepts like separatedness, openness and compactness, with respect to L-closure preserving maps. As a result of these investigations we provide a concrete description of the Zariski closure for approach spaces as introduced by Giuli in 2006.

References:

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