The Isbell-convex hull of a T_0-quasi-metric space

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Isbell constructed the hyperconvex (or injective) hull of a metric space. Later his theory was rediscovered independently several times, for instance by Dress in his theory of the tight span of a metric space.

Lawvere had observed that metrics that do not necessarily satisfy the symmetry condition (they will be called *quasi-metrics* in the following) can be understood as quantified partial orders. This crucial observation indeed helps explain many similarities that exist in the classical theories of metric spaces and the theory of partially ordered sets, since in fact both theories can be understood as special cases of the more general theory of T_0-quasi-metric spaces. In the last years many aspects of the theory of analysis in metric spaces have been generalized to quasi-metric spaces.

In our talk we shall consider the injective hull in the category of T_0-quasi-metric spaces. A simple example will illustrate how the injective hull in the category of T_0-quasi-metric spaces generalizes the better known Dedekind-MacNeille completion for partially ordered sets.