



Upper set-convergences and minimal limits

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Hyperspaces are spaces of subsets of a given metric space. Convergences on hyperspaces are called set-convergences. *Upper* set-convergences are set-convergences with the property that every supset of a limit is a limit. Upper Vietoris, upper Hausdorff, upper Attouch-Wets, upper bornological, upper Wijsman and upper Kuratowski convergence are examples of upper set-convergences.

We study problems of existence and uniqueness of minimal limits for upper set-convergences. We show that for compact limits minimal limits do exist.

As an applications we obtain results on existence of minimal upper semicontinuous compact-valued (usco) maps. In particular, we get the classical results for the Vietoris usco maps.

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