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Cardinal invariants of universals

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Abstract: We examine when a space X has a zero set universal parametrised by a metrisable space of minimal weight and show that this depends on the σ -weight of X when X is perfectly normal. We also show that if Y parametrises a zero set universal for X then $hL(X^n) \leq hd(Y)$ for all $n \in \mathbb{N}$. We construct zero set universals that have nice properties (such as separability or ccc) in the case where the space has a K -coarser topology. Examples are given including an S space with zero set universal parametrised by an L space (and vice versa).

Keywords: zero set universals, continuous function universals, S and L spaces, admissible topology, cardinal invariants, function spaces

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