Blocking properties of the diagonal in Cartesian product

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(join work with A. Illanes, V. Martínez-de-la-Vega, and J. M. Martínez-Montejano)

Given a continuum $X$, let $\triangle = \{(x, x) \in X^2 : x \in X\}$. We deal with six topological concepts that describe that $\triangle$ is on the "edge" of $X^2$, namely when $\triangle$ is: colocal connected, non-weak cut, non-block, shore, non-strong center and non-cut in $X^2$. During my talk I will present some new results concerning this topic, when $X$ belongs to one of the following classes: locally connected continua, arc-like continua, indecomposable continua and metric compactifications of the ray $[0, \infty)$.