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Adam Białożyt

The Tangent Cone of a Medial Axis

Description: As was proved by Birbrair and Siersma, the tangent cone at $a \in \mathbb{R}^n$ to the conflict set of $\{X_1, \ldots, X_k\}$ depends only on the set of points in $X_1, \ldots, X_k$ closest to a. The relation between conflict sets and medial axes gives grounds for a belief that a similar result should hold in the medial axis realm. Unfortunately, while adopting the original proof, one stumbles upon a lack of monotonicity of the medial axis with respect to the inclusion. This nefarious trait of the medial axis sabotages the transition of the reasoning. During the seminar we will show which parts of the Birbrair-Siersma theorem are salvageable in the setting of medial axes and present their corollaries.