Collapsing topology at singular points

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We study isolated singular points of real and complex algebraic and semialgebraic sets from a metric viewpoint. The topology of the link of the singular set is collapsing at the singular point. For the metric study it is important to see a difference between slow collapsing topology and fast collapsing topology. We show that there exists a so-called thin-thick decomposition near singular points. The thick part is responsible to the slow collapsing topology and the fast collapsing topology collapses only at the thin part. We show that this decomposition is canonical with respect to some natural equvalence relation. We are also going to make some conjectures, relating the theory with Lipschitz Geometry. Based on joint works with Alexandre Fernandes, Vincent Grandjean and Donal O'Shea.