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Generic Regularity of Minimal Hypersurfaces in Dimension 8

The well-known Simons' cone suggests that minimal hypersurfaces could be possibly singular in a Riemannian manifold with dimension greater than 7, unlike the low dimensional case. Nevertheless, it was conjectured that one could perturb away these singularities generically. In this talk, I will discuss how to perturb them away to obtain a smooth minimal hypersurface in an 8-dimension closed manifold, by induction on the "capacity" of singular sets. This result generalizes the previous works by N. Smale and by Chodosh-Liokumovich-Spolaor to any 8-dimensional closed manifold. This talk is based on joint work with Zhihan Wang.