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Hung T Tran* (htt4@cornell.edu). *Index of Free Boundary Minimal Hypersurfaces.*

A free boundary minimal hypersurface in the unit Euclidean ball is a critical point of the volume functional among all hypersurfaces with boundaries in the unit sphere, the boundary of the ball. The Morse index gives the number of distinct admissible deformations which decrease the area to second order. In this talk, we discuss recent developments in this area and give explicit index computation for many known examples. Part of this is a joint work with Ari Stern, Detang Zhou, and Graham Smith. (Received July 07, 2017)