

The Singular Set of Minimal Hypersurfaces with Bounded Index

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Ten years ago, Naber and Valtorta posted their powerful techniques for obtaining quantitative estimates on the singular set for minimal hypersurfaces (area minimizing currents) to the ArXiv. Since then, their techniques have been adapted to obtain similar results in many different problems, including Unique Continuation for Elliptic PDEs, harmonic maps, Q -valued harmonic functions, Free-boundary problems, and many other applications. In this talk, we will discuss the extension of these results beyond the area-minimal case to critical points of the area functional with bounded index in the Morse sense. This work relies fundamentally on the powerful regularity theory of N. Wickramasekera. This talk is based on joint work with Nicolau Aiex and Paul Minter.

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