# Harmonic analysis tools for free boundary problems

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## Abstract

Abstract: In this talk we will review some recent and not so recent work in which we apply tools and ideas from harmonic analysis and geometric measure theory to study (almost-)minimizers to free boundary problems of Alt–Caffarelli–Friedman type. In particular we will show how the regularized distances of David–Feneuil–Mayboroda can be used to produce (counter-)examples regarding the behavior of cusp points in two-phase free boundary problems. This is joint work with Guy David, Mariana Smit Vega Garcia and Tatiana Toro.