Yumeng Ou

University of Pennsylvania

Monday, March 21, 2022

Abstract:

The Falconer distance conjecture states that if a compact set in R^d has Hausdorff dimension larger than $d/2$, then its distance set must have positive Lebesgue measure. The conjecture and its variants have attracted a great amount of attention from geometric measure theory and Fourier analysis over the decades. We will introduce some recent developments towards them, among which different types of projection theorems of fractal measures play a key role.