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THE HONG KONG UNIVERSITY OF SCIENCE & TECHNOLOGY

Department of Mathematics

SEMINAR ON PDE

Rectifiability and uniqueness of blow-ups for points with positive Alt-Caffarelli-Friedman limit

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Abstract

The Alt-Caffarelli-Friedman (ACF) monotonicity formula is an important tool in the study of free boundary problems. More generally, given any pair of nonnegative subharmonic functions with disjoint positivity sets, the ACF formula provides information about the interface between the supports. In this talk we'll show that on the portion of the interface where the ACF formula is asymptotically positive forms an H^{n-1}-rectifiable set, and that the two functions have unique blowups at H^{n-1} almost every such point. This talk is based on joint work with Mark Allen and Dennis Kriventsov.

Date: 17 March 2023 (Friday)

Time: 9:00am

Zoom Meeting: https://hkust.zoom.us/j/97937086485 (Passcode: 336205)

All are Welcome!