Department of Mathematics
The Chinese University of Hong Kong

數學系
香港中文大學

Seminar

On hinges inside thin subsets of Euclidean spaces

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Abstract

In this talk we will show that when the Hausdorff dimension of a subset $E \subset \mathbb{R}^d$ is greater than $\frac{d}{2}+\frac{1}{3}$, the Lebesgue measure of
$$\{(|x-y|, |y-z|):x,y,z\in E\}$$
must be positive. It can be seen as a progress from the distance problem, where $\frac{d}{2}+\frac{1}{3}$ is known, to the pinned distance problem, where $\frac{d}{2}+\frac{1}{3}$ is expected.

Date: 1 February 2018 (Thursday)
Time: 2:00pm – 3:00pm
Venue: Room 219, Lady Shaw Building,
        The Chinese University of Hong Kong, Shatin

All are Welcome