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Title of the talk

The center of distances and central Cantor sets

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Abstract

A recently discovered metric invariant – the center of distances – turned out to be extremely useful in proving that a given subset of reals is not an achievement set, that is, a set of subsums of an absolutely convergent series. The center of distances of a set A in a metric space (X, d) is defined by

$$S(A) := \big\{ \alpha \in [0, +\infty) : \ \forall \, x \in A \quad \exists \, y \in A \quad d(x, y) = \alpha \big\}.$$

This talk concentrates of the question which central Cantor sets have the minimal possible center of distances and which have not.

References

[1] W. Bielas, Sz. Plewik, M. Walczyńska, *On the center of distances*, *Eur. J. Math.*, Vol. 4, No. 2, pp.687–698, 2022.