PROJECTIONS AND CURVES IN INFINITE-DIMENSIONAL BANACH SPACES

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1. Abstract

In this talk we will discuss the classical Besicovitch-Federer projection theorem and. The Besicovitch-Federer projection theorem offers a characterization of rectifiability of one-dimensional sets in $\mathbb{R}^d$ by the size of their projections to lines. We will focus on the validity of the Besicovitch-Federer projection theorem in the case of sets in infinite-dimensional Banach spaces. In particular, we will show that this is false and discuss its application to the class of curves with σ-finite one-dimensional Hausdorff measure.

This is joint work with Marianna Csörnyei and David Bate.