Professor Scott Zimmerman

The Ohio State University
Thursday, October 10, 2024
French Hall West, Room 4221
4:00-5:00pm

Bi-Lipschitz arcs in metric spaces

A bi-Lipschitz arc in a metric space X is the image of an interval in the real line under a bi-Lipschitz map, and, from a metric point of view, such a set is indistinguishable from the interval. In this talk, we'll consider the following question: given a set $K \subset \mathbb{R}$ and a bi-Lipschitz map $f:K \to X$, is $f(K)$ always contained in a bi-Lipschitz arc? This question was answered positively in the case $X = \mathbb{R}^n$ by David and Semmes for $n \geq 3$ and later by MacManus when $n = 2$. I will present a large class of metric spaces in which we can also answer this question positively and discuss the ideas behind the constructions. This is joint work with Jacob Honeycutt and Vyron Vellis.

Refreshments will be served 3:15-3:45 pm in the Faculty Lounge
4118 French Hall West

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