

# Wild things are fractals

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In this talk I will discuss a relationship between the Hausdorff dimension of a subset of  $R^n$  and what is called the embedding dimension of the set. The fact that such a relationship exists is surprising because the Hausdorff dimension is a metric (or geometric) invariant while the embedding dimension is a topological invariant. One consequence of the connection is the fact that every wildly embedded subset of  $R^n$  is a fractal.

I will include a survey of the relevant definitions that is intended to make the talk accessible to graduate students. The beautiful visual ideas behind the theorems and their proofs will be illustrated by a variety of examples of Cantor sets in  $R^n$ .