

ARE YOU SELF-SIMILAR?

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Abstract:

By the *self-similar set* we understand a nonempty compact set $A \subset X$ such that

$$A = \bigcup_{f \in \mathcal{F}} f(A)$$

for some finite family \mathcal{F} of continuous contractive self-maps on the topological space X . Self-similarity is one of the most common properties of fractals. We deal with the question: *Which compact spaces are self-similar?*

There are several variants of that problem depends on functions from family \mathcal{F} - similarities, Banach contractions, weak contractions, topologically contracting system, etc.

We will show several results connected to that problem for Peano continua and zero-dimensional spaces. This is a joint work with Taras Banakh.

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