

Cantor set in \mathbb{R}^3 ambiently universal for a special family of Antoine Necklaces

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Let F be a family of sets in \mathbb{R}^3 . A set $U \subset \mathbb{R}^3$ is called *ambiently universal set for the family F* if for each set $M \in F$ there exists a homeomorphism h_M of \mathbb{R}^3 onto itself such that $h_M(M) \subset U$.

Bothe showed that in \mathbb{R}^3 there does not exist a closed zero-dimensional set ambiently universal for all Cantor sets [1].

Proof of Theorem 5.1 in [3] implies that in \mathbb{R}^3 there does not exist a closed zero-dimensional set ambiently universal for all Antoine necklaces. (By Antoine necklace we mean Cantor sets in \mathbb{R}^3 of special type; they generalize classical Antoine's construction and were defined in [2].)

In the talk we will define a special class of Antoine necklaces and construct a Cantor set ambiently universal for this family.

References

[1] H.G.Bothe, Zur Lage null- und eindimensionaler Punktmengen // Fund. Math. LVIII (1966), 1–30.

[2] R.B.Sher, Concerning wild Cantor sets in E^3 // Proc. Amer. Math. Soc. 19 (1968), 1195-1200.

[3] D.G. Wright, Ambiently universal sets in E^n // Trans. Amer. Math. Soc. 277, 2 (1983), 655–664.

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