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Techniques for determining rigidity of embeddings of Cantor sets

We discuss the techniques used in our proof that there exist rigid wild Cantor sets in \mathbb{R}^3 with simply connected complement. Previous constructions of rigid Cantor sets using variations on the Antoine construction in \mathbb{R}^3 had non simply connected complement. The simply connected examples are constructed using a generalization of a construction of Skora together with a careful analysis of the local genus of points in the Cantor sets.

References

- [1] R. Skora. Cantor sets in S^3 with simply connected complements, *Topol. Appl.* **24** (1986), 181-188.
- [2] M. Željko. Genus of a Cantor Set, *Rocky Mountain J. Math.*, vol. 35, no. 1, 2005.

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