

Fundamental group of Rauzy fractals

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The talk is based on the joint work with Timo Jolivet and Jun Luo

Session: 37. Wild algebraic and geometric topology

We are interested in the fundamental group of special classes of graph directed self-affine sets associated with substitution dynamical systems, called *Rauzy fractals*. There are many known examples of Rauzy fractals which are homeomorphic to the closed disk or whose fundamental group is uncountable. We show that the intermediate situation, with countable fundamental group, occurs. More precisely, we obtain that every group of finite rank can be realized as the fundamental group of a planar Rauzy fractal and give an explicit construction.