On the fundamental group of one-dimensional spaces

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In a recent paper we gave a description of the fundamental group of the Sierpiński-gasket $\triangle$. The method we used employs a combinatorial word structure to represent loops in a sequence of approximating spaces. This way the fundamental group of $\triangle$ can be characterized as a subgroup of the Čech group of $\triangle$ (which is a projective limit of free groups) utilizing an intermediate projective limit of semigroups the elements of which describe loops up to re-parametrization.

In the talk we will present our method and show that this approach is applicable to a large class of one-dimensional spaces.