Katsuya EDA

Atomic property of the fundamental groups of wild Peano continua

Abstract. The fundamental groups of wild Peano continua are hard to take apart into free products. (The word "wild" means that a space is everywhere non-semi-locally simply-connected.) Previously the speaker has proved such a kind of statements and actually this property of the Hawaiian earring group, that is, the fundamental group of the Hawaiian earring reflects to the fact that the fundamental groups of one-dimensional wild Peano continua determine the topologies of the original spaces. In this talk I'll outline proofs of the following theorems.

1. Let h be a homomorphism from the the Hawaiian earring group to a free product $G * H$. Then the homomorphic image of h is almost contained in a conjugate subgroup of G or H.

2. Suppose that the fundamental group of a wild Peano continuum is contained in a free product $G * H$. Then it is contained in a conjugate subgroup of G or H.