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by

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SUSPENSIONS OF LOCALLY CONNECTED CURVES: HOMOGENEITY DEGREE AND UNIQUENESS

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Abstract. The homogeneity degree of a space X is the number of orbits for the action of the group of homeomorphisms of X onto itself. We determine the homogeneity degree of the suspension over a locally connected curve X not being a local dendrite in terms of that of X. Using the main result of Alicia Santiago-Santos's *Degree of homogeneity on suspensions* (Topology Appl. **158** (2011), no. 16, 2125–2139) gives us a formula for the homogeneity degree of the suspension over any locally connected curve X.

We also prove that the suspensions over locally connected curves not being local dendrites X and Y are homeomorphic if and only if X and Y are homeomorphic.

1. Introduction

A *continuum* is a nondegenerate compact connected metric space. A *curve* is a one-dimensional continuum. An *arc* is a continuum homeomorphic to the interval $\mathbb{I} = [0,1]$. A *simple closed curve* is a continuum homeomorphic to the unit circle S^1.

Let X be a topological space. The *cone* of X is the quotient space defined by

$$\mathrm{Cone}(X) = X \times \mathbb{I} / \{X \times \{1\}\},$$

and the *suspension* of X is the quotient space defined by

$$\mathrm{Sus}(X) = X \times \mathbb{I} / \{X \times \{0\},\ X \times \{1\}\}.$$

Let $\mathcal{H}(X)$ denote the group of homeomorphisms of X onto itself. An *orbit of* X is an orbit under the action of $\mathcal{H}(X)$. Given a point $x \in X$,

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