

Further Examples of Homotopy Inequivalent 2-Complexes at a Non-Minimal Level. AMS Special Session on Low-Dimensional Topology, Joint Mathematics Meetings, San Diego, CA (January 2002).

Abstract

An open question in low dimensional topology is the classification of the homotopy type of 2-dimensional CW-complexes, hereafter 2-complexes, with isomorphic fundamental group $\pi_1 X \cong \pi_1 Y \cong G$, and the same Euler characteristic, $\chi(X) = \chi(Y)$. In 1977, Dunwoody discovered a new presentation of the trefoil group, T , which was the first example of homotopy inequivalent 2-complexes above minimal Euler characteristic. We will extend Dunwoody's result by demonstrating a number of presentations of $T \times \mathbb{Z}$ which give rise to homotopy inequivalent 2-complexes above minimal level.