

1067-20-1187

Sang-hyun Kim* (shkim@kaist.edu) and **Sang-il Oum** (sangil@kaist.edu). *Hyperbolic Surface Subgroups of One-ended Doubles of Free Groups.*

A double of a free group is the fundamental group of a graph of groups where there are two free isomorphic vertex groups and several infinite cyclic edge groups joining them, glued symmetrically. We prove that a double is one-ended if and only if it contains a hyperbolic surface group, when the free group has rank two or the set of amalgamating words contains each generator the same number of times. (Received September 19, 2010)