INDEPENDENCE COMPLEXES OF CHORDAL GRAPHS

KAZUHIRO KAWAMURA

We show that the independence complex I(G) of an arbitrary chordal graph G is either contractible or is homotopy equivalent to the finite wedge of spheres of dimension at least the domination number of G minus 1. Also it is shown that every finite wedge of spheres (as well as a singleton) is realized as the homotopy type of the independence complex of a chordal graph. A combinatorial consequence is a verification of a conjecture due to Aharoni, Berger and Ziv for chordal graphs.