1083-13-144 **Hailong Dao** and **Jay Schweig***, jay.schweig@okstate.edu. *Projective Dimension and Graph Domination Parameters.*

Often studied in network theory, the domination number of a finite graph G is the least cardinality of a subset S of its vertices such that any vertex not in S is adjacent to a vertex in S. Other domination parameters have been defined in similar ways. We show that these parameters applied to G arise naturally in bounding the projective dimension of the associated edge ideal. Through Hochster's formula, these bounds allow us to easily recover and sometimes strengthen existing results on graph independence complexes. (Received August 26, 2012)