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**Hailong Dao** and **Jay Schweig\***, 401 MSCS, Stillwater, OK 74078. *Projective Dimension and Domination in Graphs and Clutters.*

The projective dimension of a squarefree monomial ideal  $I$  is the minimal length of a free resolution of  $I$ . Via Hochster's formula, an ideal's projective dimension can also be defined in terms of homology. We show a far-reaching link between projective dimension and domination parameters; a class of complexity measures in graphs and clutters. Loosely speaking, a domination parameter measures how easy it is to "cover" a graph with various subgraphs. Using these parameters on an ideal's clutter of minimal non-faces, we can bound the ideal's projective dimension. This also allows us to obtain bounds on the non-vanishing homology of the associated Stanley-Reisner complex. (Received August 31, 2014)