

1131-05-375

**Hailong Dao**, Department of Mathematics, 405 Snow Hall, 1460 Jayhawk Boulevard, Lawrence, KS 66045, and **Jay Schweig\***, 401 MSCS, Stillwater, OK 74078. *The type defect of a simplicial complex.*

If  $K$  is a simplicial complex of codimension  $c$ , we say that the type of  $K$  is the total Betti number of the associated Stanley-Reisner ideal in degree  $c$ . We then define the type defect of  $K$  to be its type minus its codimension. We show that this invariant has many connections to previously studied properties of graphs and simplicial complexes. For example, we show that a graph is chordal iff every induced subgraph has nonnegative type defect. The relationship to chordality also generalizes to higher dimensions, allowing us to study complexes whose duals have linear resolutions; a common feature of many of the different definitions of chordal complexes. (Received July 18, 2017)