
SUSAN COOPER, North Dakota State University

The Waldschmidt Constant For Monomial Ideals

The Waldschmidt constant is a limit which was first introduced as a way to estimate the lowest degree of a hypersurface vanishing at all the points of a variety to a given order. This special limit can be used to find failure of containments between symbolic and regular powers of a homogeneous ideal. However, this useful limit is challenging to compute. We will give some interpretations of the Waldschmidt constant of a monomial ideal which allow us to determine this useful limit in a number of cases. This is joint work from two projects: the first with R. Embree, H. T. Hà, and A. Hoefel and the second with C. Bocci, E. Guardo, B. Harbourne, M. Janssen, U. Nagel, A. Seceleanu, A. Van Tuyl, and T. Vu.