

Leah Gold

Cleveland State University

Title: The Multiplicity Conjectures

Abstract: In 1985 Huneke and Miller published a succinct formula for the degree of R/I when R/I is Cohen-Macaulay and has a pure resolution. Later Huneke, Srinivasan, and Herzog generalized this statement with some conjectures about bounds for the degree in terms of the largest and smallest Betti numbers. Numerous calculations have supported these conjectures, but proofs are elusive. We will discuss the conjectures and some of the special cases where results are known.