

The Multiplicity Conjecture
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Herzog, Huneke, and Srinivasan conjectured bounds on the multiplicity of a graded module M over a polynomial ring. In order to prove this, Boij and Soderberg (2008) stated conjectures about the graded betti numbers of M . Eisenbud and Schreyer (2009) proved the Boij-Soderberg conjectures, thus resolving the multiplicity conjecture. In this talk, we introduce the concepts needed to state these conjectures. We then show how the Boij-Soderberg conjectures imply the multiplicity conjecture, and finally, see an application of this to other rings.

Pre-requisites :
Familiarity with basic commutative algebra will be assumed.