

Cohomological support varieties and monomial ideals

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Given a ring R and an R -module M , the cohomological support variety of M is a geometric object that encodes homological information about M . Even restricting to the case when $M=R$, we can obtain information about the singularities of R , such as whether R is complete intersection. In this talk, we will consider the problem of whether R has an embedded deformation, and how cohomological support varieties might be used to detect this property when R is defined by monomials. This is joint work with Ben Briggs and Josh Pollitz.

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