

1131-13-149

Mark Johnson and **Paolo Mantero*** (pmantero@uark.edu). *Betti numbers of the conormal module of a Gorenstein ideal.* Preliminary report.

Let R be a polynomial ring over a field, and I a perfect ideal that is generically a complete intersection, the conormal module I/I^2 is an R/I -module of interest for several purposes. When I is not a regular ideal, I/I^2 has an infinite minimal free resolution as an R/I -module.

In the present work we provide sharp lower bounds on all the Betti numbers $\beta_i^{R/I}(I/I^2)$; these bounds are more interesting when R/I is Gorenstein. Somewhat surprisingly, the lower bounds are essentially given by the Fibonacci sequence! (Received July 11, 2017)