

1159-13-139

Paolo Mantero* (pmantero@uark.edu) and **Matthew Mastroeni** (mmastro@okstate.edu).

Betti numbers of Koszul algebras defined by four quadrics.

Let I be an ideal generated by quadrics in a standard graded polynomial ring S over a field. A question of Avramov, Conca, and Iyengar asks whether the Betti numbers of $R = S/I$ over S can be bounded above by binomial coefficients on the minimal number of generators of I if R is Koszul. This question has been answered affirmatively for Koszul algebras defined by three quadrics and Koszul almost complete intersections with any number of generators.

We give a strong affirmative answer to the above question in the case of four quadrics by completely determining the Betti tables of Koszul algebras defined by 4 quadrics. (Received August 03, 2020)