Student Research Talks (StReeTs)

George Mason University

Determining the Betti Numbers of $R/(x^{p^e}, y^{p^e}, z^{p^e})$ for Most Even Degree Hypersurfaces in Odd Characteristic.

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Abstract

Abstract: Fix a homogeneous polynomial f in $k[x, y, z]$ with k a field of characteristic p, set $R = k[x, y, z]/(f)$, and let $\mathfrak{m} = (x, y, z)$. If f has the property link-p^e-compressed, then the graded Betti numbers of $R/\mathfrak{m}^{[p^e]}$ depend only on p^e and the degree of f, with the high graded Betti numbers only depending on d up to a constant shift. I will show that most even degree choices of f are link-p^e-compressed when p is odd.

Date: Friday,

Time: 2:30pm–3:20pm

Place: Exploratory Hall 4106 and Zoom (Meeting ID: 978 7872 4201)

Pizza will be served at the presentation.

For further information or for special accommodations (including dietary restrictions), please contact Michael Merkle or Aleyah Dawkins via email at `mmerkle@gmu.edu` or `adawkin@gmu.edu` by Thursday.