

1161-13-197

Keller VandeBogert* (kellerlv@math.sc.edu). *Trimming Complexes and Their Applications.*

In this talk, I will introduce trimming complexes. In the most general situation, these complexes are applied to the following data: let R be a commutative ring, $I = (\phi_1, \dots, \phi_n) \subseteq R$ an ideal, and $K_1, \dots, K_\ell \subseteq R$ an arbitrary collection of ideals with $\ell \leq n$. Then the trimming complex associated to this data will yield a free resolution of the ideal $J = (\phi_1, \dots, \phi_{n-\ell}) + K_1\phi_{n-\ell+1} + \dots + K_\ell\phi_n$. I will then discuss applications of these resolutions to the structure of certain classes of grade 3 homogeneous ideals defining compressed rings, and Betti tables of determinantal facet ideals. (Received August 17, 2020)