

1167-13-337

Tyler Dean Anway*, tyler.anway@mavs.uta.edu, TX. *Triangle Resolutions over Gorenstein Local Rings*. Preliminary report.

Let Q be a Gorenstein local ring and $\phi : Q \twoheadrightarrow R$ be a surjective ring homomorphism such that $\text{pd}_Q(R) < \infty$. Then, in the homotopy category of totally acyclic complexes, $\mathbf{K}_{tac}(R)$, we introduce the idea of a triangle resolution. Using approximations and the axioms of the triangulated category, we give a construction and define the novel idea of a triangulated Betti sequence and the complexity thereof. (Received March 09, 2021)