

1166-13-146

Brent Holmes and **Justin Lyle*** (jl1106@uark.edu). *Rank Selection and Depth Conditions for Squarefree Monomial Ideals.*

We study depth and Serre conditions of a squarefree monomial ideal I whose associated simplicial complex has a refined combinatorial structure. By passing to subdivisions, our work gives information on depth and Serre conditions for arbitrary squarefree monomial ideals. Connections are drawn between these simplicial complexes and the so-called higher nerve complexes associated to I . This is based primarily on joint work with Brent Holmes. (Received February 16, 2021)