

1051-13-111

Susan E. Morey* (morey@txstate.edu), Department of Mathematics, Texas State University, 601 University Dr, San Marcos, TX 78666. *Lower Bounds for Depths of Powers of Edge Ideals of Trees and Graphs.*

Lower bounds are given for the depths of R/I^t for $t \geq 1$ when I is the edge ideal of a tree or forest. The bounds are given in terms of the diameter of the tree, or in case of a forest, the largest diameter of a connected component and the number of connected components. These lower bounds provide a lower bound on the power for which the depths stabilize. For the edge ideal of a more general graph, similar bounds are given for low powers of the ideal. (Received August 20, 2009)