1162-15-46 **Shaun M Fallat*** (shaun.fallat@uregina.ca), Department of Mathematics and Statistics, University of Regina, Regina, Sask S4N5C3, Canada. *Variants of Maximum Nullity and Zero Forcing on Trees.*

For a graph G and a nonnegative integer q, we let $S_q(G)$ denote the subset of all real symmetric matrices in $S(G)$ having q negative eigenvalues. We define $M_q(G)$ to be the maximum nullity over the set $S_q(G)$. As with the standard maximum nullity parameter for G, a q-analogue of zero forcing exists, known as $Z_q(G)$, and satisfies $M_q(G) \leq Z_q(G)$. The Z_q game on a graph is an adaption of conventional zero forcing involving a second player and a third forcing option.

In this talk, we present a suite of results and properties about these parameters in the case of trees with particular attention when $q = 1$. (Received August 19, 2020)