1116-05-461 **Aida Abiad**, **Phil DeOrsey**, **Leslie Hogben**, **Kirsten Hogenson*** (kahogens@iastate.edu), **Franklin Kenter**, **Jephian C.-H. Lin**, **Sarah Loeb**, **Heather Smith** and **Michael Young**.
Zero forcing number on the counterprism of graphs.

The zero forcing number of a graph, $Z(G)$, is used in combinatorial matrix theory as an upper bound for the maximum nullity of a graph, $M(G)$. The Graph Complement Conjecture for a graph parameter β of a simple graph G concerns the following inequality: $\beta(G) + \beta(\overline{G}) \geq |G| - 2$. This inequality is known to be true for $\beta = Z$, but is still unknown for $\beta = M$. To work toward the Graph Complement Conjecture for M, we define the counterprism of G, denoted $\sqcup G$, to be the graph on $2|G|$ vertices which is the disjoint union of G, $\overline{G}$, and a perfect matching between the corresponding vertices of G and $\overline{G}$. We have found that $Z(\sqcup G) \in \{|G| - 1, |G|\}$. In this talk, I will discuss this result, as well as some results characterizing graphs G such that $Z(\sqcup G) = |G| - 1$ and $Z(\sqcup G) = |G|$. This research was conducted during the 2015 Rocky Mountain-Great Plains Graduate Research Workshop in Combinatorics in Ames, IA. (Received September 02, 2015)