1127-05-372 **Jeremy F Alm*** (alm.academic@gmail.com), Jacksonville, IL 62650, and **Keenan M L Mack**.
Robustness and vulnerability in correlated power-law networks.

Many naturally occurring networks have a power-law degree distribution as well as a non-zero degree correlation. Despite this, most studies analyzing the robustness to random node-deletion and vulnerability to targeted node-deletion have concentrated only on power-law degree distribution and ignored degree correlation. In this talk, we consider the effect that degree-correlation has on robustness and vulnerability in scale-free networks. We found that networks with positive degree-correlation are more vulnerable to random node-deletion than to targeted deletion methods that utilize knowledge of initial node-degree only. Targeted deletion sufficiently alters the topology of the network to render this method less effective than uniform random methods unless changes in topology are accounted for. (Received February 07, 2017)