1132-05-265 **Louis DeBiasio*** (debiasld@miamioh.edu), **Bob Krueger**, **Dan Pritikin** and **Eli Thompson**.
Robust Expansion and Hamiltonian Cycles in k-partite Graphs.

It was shown by Kühn, Osthus, and Treglown that graphs with linear minimum degree having a certain robust expansion property must contain a Hamiltonian cycle. This concept of robust expansion has since been used to prove a number of even stronger results for graphs and digraphs.

We will discuss a recent result regarding a minimum degree condition for Hamiltonian cycles in not-necessarily-balanced k-partite graphs, which generalizes known results for balanced k-partite graphs. Along the way, we will present a simplified method for showing that a graph is either a robust expander or it is close to an extremal example. (Received July 24, 2017)