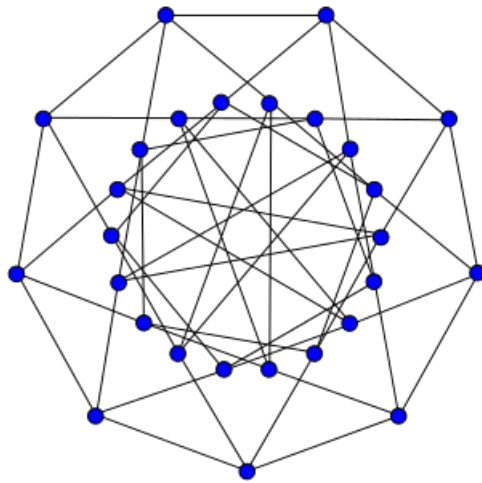# VCU Discrete Mathematics Seminar

Bipartite Edge-Transitive Products

Cameron Crenshaw
VCU!

Wed., May 3
1:00-1:50
4119 Harris Hall

In their recent paper "Edge-transitive products," Hammack, Imrich, and Klavzar showed that the direct product of connected, non-bipartite graphs is edge-transitive if and only if both factors are edge-transitive, and at least one is arc-transitive. However, little is known when the product is bipartite. We extend this result (in part) for the case of bipartite graphs using a new technique we call "stacking." For R-thin, connected, bipartite graphs A and B, we show that $A \times B$ is arc-transitive if and only if A and B are both arc-transitive. Further, we show $A \times B$ is edge-transitive only if at least one of A, B is also edge-transitive, and give evidence that strongly suggests that in fact both factors must be edge-transitive.