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Brian K Nakamura* (bnaka@dimacs.rutgers.edu) and **Elizabeth Yang**. *Competition graphs induced by permutations*. Preliminary report.

Given a directed graph D , its corresponding competition graph G is the undirected graph with the same vertex set as D and the edge set $E(G)$ where there exists an edge uv in $E(G)$ if and only if there exists a vertex w such that arcs (u, w) and (v, w) are both in $V(D)$. Competition graphs have been studied since 1968, when Cohen introduced the notion as a method to study food webs in ecology. In this talk, we will introduce the notion of permutations inducing competition graphs. We will show interesting connections that these competition graphs have with patterns in permutations. (Received July 28, 2014)