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Sarah K Merz* (smerz@pacific.edu), Department of Mathematics, University of the Pacific, Stockton, CA 95211, and **Kim A.S. Factor**. *The (1,2)-step competition graph of a tournament.*

The competition graph of a digraph, introduced by Cohen in 1968, has been extensively studied. More recently, in 2000, Cho, Kim, and Nam defined the m -step competition graph. In this talk, we offer another generalization of the competition graph. We define the (1,2)-step competition graph of a digraph D , denoted $C_{1,2}(D)$, as the graph on $V(D)$ where $\{x, y\} \in E(C_{1,2}D)$ if and only if there exists a vertex $z \neq x, y$, such that either $dist_{D-y}(x, z) = 1$ and $dist_{D-x}(y, z) \leq 2$ or $dist_{D-x}(y, z) = 1$ and $dist_{D-y}(x, z) \leq 2$. In this talk, we characterize the (1,2)-step competition graph of tournaments and extend our results to the (i, j) -step competition graph of a tournament. (Received September 17, 2009)