

1046-05-868

**Kim A.S. Factor**, Marquette University, Milwaukee, WI 53201, and **Larry J. Langley\***,  
University of the Pacific, Stockton, CA 95211. *Secondary Domination Graphs of Tournaments.*

We adapt a definition for secondary domination by Hedetniemi et.al. to directed graphs. In particular we consider the  $(1, 2)$ -domination graph of tournaments. Given a directed graph  $D$ , two vertices  $x$  and  $y$  form a  $(1, 2)$ -dominating pair if and only if, for any other vertex in the graph  $z$ , you can reach  $z$  in at most one step from one of  $x$  or  $y$  and in at most two steps from the other vertex. A  $(1, 2)$ -domination graph on the vertex set of  $D$  has edge  $xy$  if and only if  $x$  and  $y$  are a  $(1, 2)$ -dominating pair of  $D$ . We examine the structure of  $(1, 2)$ -domination graphs of tournaments. (Received September 12, 2008)