

1164-05-177

Wei Meng, Shanxi University, **Martin Rolek**, Kennesaw State University, **Yue Wang**, Shandong University, and **Gexin Yu*** (gyu@wm.edu), Department of Mathematics, William & Mary, Williamsburg, VA 23188. *An improved linear connectivity bound for tournaments to be highly linked*. Preliminary report.

A digraph is k -linked if for any two disjoint sets of vertices $\{x_1, \dots, x_k\}$ and $\{y_1, \dots, y_k\}$ there are vertex disjoint paths P_1, \dots, P_k such that P_i is directed from x_i to y_i for $i = 1, \dots, k$. Pokrovskiy in 2015 proved that every strongly $452k$ -connected tournament is k -linked. In this paper, we significantly reduce this connectivity bound and show that any $(40k - 19)$ -connected tournament is k -linked. (Received January 18, 2021)