

1155-05-483

Yue Wang* (15064013175@163.com), Williamsburg, VA 23185, and **Gexin Yu** (gyu@wm.edu), Williamsburg, VA 23187. *Enhancing the Erdős-Lo'vasz Tihany conjecture for line graphs of multigraphs.*

In this paper, we prove an enhanced version of the Erdős-Lov'asz Tihany Conjecture for line graphs of multigraphs. That is, for every graph G whose chromatic number $\chi(G)$ is more than its clique number $\omega(G)$ and for nonnegative integer ℓ , any two integers $s, t \geq \chi(G) - 1$ with $st = \chi(G) - 1$, there is a partition (S, T) of the vertex set $V(G)$ such that $\chi(G[S]) \leq s$ and $\chi(G[T]) \leq t + \ell$. In particular, when $\ell = 1$, we can obtain the same result just for any $s, t \geq 4$. The Erdős-Lo'vasz Tihany conjecture is a special case when $\ell = 0$. (Received January 21, 2020)