

1117-05-304

**Guantao Chen\*** (gchen@gsu.edu), Department of Mathematics and Statistics, Georgia State University, Atlanta, GA 30303, and **Zhiquan Hu** and **Feifei Song**. *A degree condition for knitted graphs.*

Let  $G$  be a graph and  $S$  be a vertex subset of  $G$ . The pair  $(G, S)$  is called *knitted* if, for every partition of  $S$  into non-empty subsets  $S_1, S_2, \dots, S_t$ , there exist disjoint connected subgraphs  $C_1, C_2, \dots, C_t$  in  $G$  so that  $S_i \subseteq V(C_i)$  for each  $1 \leq i \leq t$ . A graph  $G$  is called  $\ell$ -*knitted* if  $(G, S)$  is knitted for all subsets  $S$  of  $V(G)$  with  $|S| = \ell$ . Clearly, a  $2k$ -knitted graph is  $k$ -linked. In this talk, we give a new sufficient condition for  $\ell$ -knitted graphs. Our result generalizes a sufficient degree condition for  $k$ -linked graphs obtained by Kawarabayashi, Kostochka and Yu. (Received January 16, 2016)