1090-05-247 **Ramin Javadi**, **Zeinab Maleki*** (zmaleki@illinois.edu) and **Behnaz Omoomi**. *Local Clique Covering of Graphs.*

A *k-clique covering* of a simple graph G, is an edge covering of G by its cliques such that each vertex is contained in at most k cliques. The smallest k for which G admits a k-clique covering is called *local clique cover number* of G and is denoted by $\mathrm{lcc}(G)$. This parameter appears to have a lot of interesting relations and connections to other parameters on the graph and the concept can be interpreted as several other well-known problems. For instance, $\mathrm{lcc}(G)$ is equal to the minimum number k for which G is isomorphic to the line graph of a k-uniform hypergraph. It is also related to a parameter called *Kneser index* of G, that is the minimum number k for which G is isomorphic to an induced subgraph of a Kneser graph $\mathrm{kn}(n, k)$. Moreover, it has an interpretation as some kind of set representation for G. We investigate on several aspects of the problem and we obtain some upper and lower bounds in terms of other parameters of G. Then we focus on the case of *claw-free graphs* and we arise the question that how large the lcc of a claw-free graph can be. We answer this question completely, as well as the same question for a special family of claw-free graphs called linear interval graphs. (Received March 04, 2013)