

1108-05-132

**Jozsef Balogh, Hong Liu\*** (hliu36@illinois.edu) and **Maryam Sharifzadeh**. *Subdivisions of a large clique in  $C_6$ -free graphs.*

Mader conjectured that every  $C_4$ -free graph has a subdivision of a clique of order linear in its average degree. We show that every  $C_6$ -free graph has such a subdivision of a large clique.

We also prove the dense case of Mader's conjecture in a stronger sense, i.e., for every  $c$ , there is a  $c'$  such that every  $C_4$ -free graph with average degree  $cn^{1/2}$  has a subdivision of a clique  $K_\ell$  with  $\ell = \lfloor c'n^{1/2} \rfloor$  where every edge is subdivided exactly 3 times.

Joint work with Jozsef Balogh and Maryam Sharifzadeh (Received January 07, 2015)