

1014-05-602

**D. J. Ashe\*** (David-Ashe@utc.edu), **C. D. Leach** and **C. A. Rodger**. *2-Regular Leaves of Partial 8-cycle Systems.*

We find necessary and sufficient conditions for the existence of an 8-cycle system of  $K_n - E(R)$  where  $R$  is any 2-regular not necessarily spanning subgraph  $R$  of  $K_n$ . We prove this by using many base cases and two inductive lemmas. (Received September 21, 2005)