1117-05-94   **Zixia Song*** (`zixia.song@ucf.edu`) and **Lyall Reid**, Department of Mathematics, University of Central Florida, Orlando, FL 32816. *The Path Cover Number of k-regular graphs with $k \leq 6$.*

The path cover number of a graph G on n vertices is the minimum number of vertex-disjoint paths required to cover the vertices of G. Magnant and Martin in 2009 conjectured that the path cover number of a k-regular graph on n vertices is at most $\frac{n}{k+1}$. They verified the conjecture for $k \leq 5$ by a different argument for each k. Using discharging method, we give a proof of the conjecture for $k \leq 6$. (Received January 05, 2016)