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Suil O and **Gexin Yu*** (gyu@wm.edu), Department of Mathematics, College of William and Mary. *Path cover number of 4-regular graphs.*

A path cover of a graph is a set of disjoint paths so that every vertex in the graph is contained in one of the paths. The path cover number $p(G)$ of graph G is the number of path in a path cover with minimum number of paths. We prove that an 4-regular n -vertex graph G has $p(G) \leq (n + 5)/8$. This result also confirms a Graffiti.pc conjecture for 4-regular graphs. (Received January 18, 2012)