

Meeting: 1003, Atlanta, Georgia, AMS CP 1, AMS Contributed Paper Session

1003-05-355 **Guoli Ding** and **Jinko Kanno*** (jkanno@latech.edu), P.O. Box 3189 LA Tech University,
Railroad Av, Ruston, LA 71272. *Splitter theorems for 4-regular graphs.*

Let $\Phi_{k,g}$ be the class of k -connected 4-regular graphs of girth at least g . For several choices of k and g , we determine a set $\mathcal{O}_{k,g}$ of graph operations, for which, if G and H are graphs in $\Phi_{k,g}$, $G \neq H$, and G contains H as an immersion, then some operation in $\mathcal{O}_{k,g}$ can be applied to G to result in a smaller graph G' in $\Phi_{k,g}$ such that, on one hand, G' is immersed in G , and on the other hand, G' contains H as an immersion. (Received September 12, 2004)