

1086-VN-744 **Wiseley Wong*** (wawong@udel.edu). *Toughness of Some Graphs*. Preliminary report.

The vertex-toughness of a graph is a parameter relating to connectivity. The toughness is defined as the minimum value of $\frac{|S|}{c(G \setminus S)}$, where S runs through all subsets of vertices that disconnect the graph, and $c(G \setminus S)$ denotes the number of components from removing the subset of vertices. We determine the toughness of some graphs and provide sufficient eigenvalue conditions for specific toughness values. This is joint work with Sebastian Cioabă. (Received September 16, 2012)