1097-13-369 **Takayuki Hibi**, **Akihiro Higashitani**, **Kyouko Kimura** and **Augustine B. O'Keefe*** (abok222@uky.edu). *Edge ideals of Cameron-Walker graphs.*

In 2005 Cameron and Walker classified all finite simple graphs G such that the matching number of G, $m(G)$, is equal to the induced matching number of G, $i(G)$. We call such graphs Cameron-Walker graphs. This class of graphs is of particular interest to algebraists as these graph theoretic invariants provide upper and lower bounds for the Castelnuovo-Mumford regularity of the ring $R/I(G)$, where R is the polynomial ring in $|V(G)|$ variables and $I(G)$ is the edge ideal of G. Here we explore other properties of the edge ideals of Cameron-Walker graphs such as (sequentially) Cohen-Macaulayness, (pure) shellability, and (pure) vertex decomposability. (Received January 27, 2014)