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**Takayuki Hibi, Akihiro Higashitani, Kyouko Kimura and Augustine O’Keefe\***  
(abok222@uky.edu). *Edge ideals of Cameron-Walker graphs.*

Given a finite simple graph  $G = ([n], E)$  let  $R = k[x_1, \dots, x_n]$  and  $I(G)$  be the edge ideal of  $G$ . The Castelnuovo-Mumford regularity of  $R/I(G)$  is then bounded above by the matching number of  $G$ ,  $m(G)$ , and below by the induced matching of  $G$ ,  $i(G)$ . In 2005 Cameron and Walker classified all finite simple graphs for which  $m(G) = i(G)$  and so, in particular, one can determine the regularity directly from the graph. In this talk we explore other properties of the edge ideals of Cameron-Walker graphs such as (pure) vertex-decomposability, (pure) shellability, and (sequential) Cohen-Macaulayness. (Received February 10, 2014)