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**Andrzej Dudek** and **Linda Lesniak\*** (lindalesniak@gmail.com), Department of Mathematics, Western Michigan University, Kalamazoo, MI 49008. *Some remarks on vertex size-Ramsey numbers.*

Here we study an analogue of size-Ramsey numbers for vertex colorings. For a given number of colors  $r$  and a graph  $G$ , the *vertex size-Ramsey number of  $G$* , denoted by  $\hat{R}_v(G)$ , is the least number of edges in a graph  $H$  with the property that any  $r$ -coloring of the vertices of  $H$  yields a monochromatic copy of  $G$ . We observe that  $\Omega(\Delta) = \hat{R}_v(G) = O(n^2)$  for any graph  $G$  of order  $n$  and maximum degree  $\Delta$ , and prove that for some graphs these bounds are tight. On the other hand, we show that even 3-regular graphs can have nonlinear vertex size-Ramsey numbers. (Received July 31, 2015)