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Jiangxu Kong, Hong-Jian Lai and Murong Xu* (xumurong@math.wvu.edu), West Virginia University, Dept. of Math 320 Armstrong, P.O. Box 6310, Morgantown, WV 26506-6310. *On linear r -hued colorings of sparse graphs.*

For positive integers k and r , a (k, r) -coloring is a proper k -coloring c of G such that $|c(N(v))| \geq \min\{d(v), r\}$ for any $v \in V(G)$; and such a coloring is linear if for every pair of distinct colors, the color classes induce a linear forest of G , (that is a subgraph with maximum degree at most 2). The linear r -hued chromatic number of G , denoted by $\chi_r^\ell(G)$, is the smallest integer k such that G has a linear (k, r) -coloring. We will present some of the recently achieved results on linear r -hued colorings of graphs. (Received July 30, 2015)