

YMC  
XWC

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## UNIFORMLY $(3, r)$ -REGULAR GRAPHS

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**Abstract of Talk:** A graph  $G$  is uniformly  $(t, r)$ -regular if for every set of  $t$  distinct vertices of  $G$ , the open neighborhood of that set has cardinality  $r$ . Much is known about uniformly  $(2, r)$ -regular graphs, but not much is known about uniformly  $(t, r)$ -regular graphs for  $t > 2$ . We conjecture that a graph  $G$  is uniformly  $(3, r)$ -regular if and only if  $G$  is  $K_r + K_1$  or  $K_r -$  (any set of independent edges). We present progress that has been made in proving or disproving the conjecture.