

# *Recent Results on Rainbow Connectivities in Graphs*

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Let  $G$  be a non-trivial connected graph on which is defined an edge coloring  $c : E(G) \rightarrow \{1, 2, \dots, k\}$ , where  $k$  is a positive integer and where adjacent edges may be colored the same. A path  $P$  is a rainbow path if no two edges of  $P$  are colored the same. The graph  $G$  is rainbow-connected if  $G$  contains a  $u - v$  rainbow path for every pair of vertices  $u$  and  $v$  of  $G$ . The minimum  $k$  for which there exists such a  $k$ -edge coloring is the rainbow connection number  $rc(G)$  of  $G$ . Results about the rainbow number for several classes of graphs will be discussed. Finally, just as the connectivity of a graph is a measure of how connected a graph is, rainbow-connectivity will be defined and discussed.