



28TH WORKSHOP '3IN1' 2019
DOŚŁOŃCE, POLAND
NOVEMBER 21-23, 2019

ON RAINBOW DISCONNECTION OF GRAPHS

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Let G be an edge-colored connected graph. An edge-cut R of G is called a rainbow cut if no two edges in R are colored with a same color. An edge-colored graph G is called rainbow disconnected if for every pair of vertices u and v of G , there exists a $u - v$ rainbow cut in G separating them. For a connected graph G , the rainbow disconnection number of G , denoted by $rd(G)$, is defined as the smallest number of colors that are needed in order to make G rainbow disconnected. In this talk we will summarize the main results on this new graph parameter. Some open questions are also presented.