

# The induced path number of graphs and their complements

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The induced path number of a graph  $G$ , denoted  $\rho(G)$ , is defined as the minimum number of subsets into which the vertex set of  $G$  can be partitioned such that each subset induces a path. In this talk we give the induced path number of certain classes of graphs including paths, cycles and complete graphs as well as their complements. We will also give a Nordhaus-Gaddum type result for the sum of the path partition number of a graph and its complement as well as sharper lower bounds for bipartite graphs and trees.