

# Erdős-Pósa property in graphs

This thesis studies the Erdős-Pósa property in graphs, focusing on different types of graphs, including group-labelled and permutation-labelled graphs. The Erdős-Pósa property is closely connected to structural minimax theorems, which describe the duality between the minimum separators and the maximum number of particular disjoint structures in a graph. It is shown that permutation-labelled graphs, in a certain sense, generalize group-labelled graphs with respect to the Erdős-Pósa property for  $A$ -paths.