

# On finite groups whose power graph is a cograph

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## Abstract

The undirected power graph (or simply power graph) of a group  $G$ , denoted by  $P(G)$ , is a graph whose vertices are the elements of the group  $G$ , in which two vertices  $u$  and  $v$  are connected by an edge between if and only if either  $u = v^i$  or  $v = u^j$  for some  $i, j$ .

The cographs is an important graph class which can be defined in terms of forbidden induced subgraphs. A  $P_4$ -free graph is called a cograph. Here we try to understand when the power graph of a finite group is a cograph.