

# $K_{3,3}$ -free Intersection Graphs of Finite Groups

Selçuk Kayacan

Istanbul Technical University

skayacan@itu.edu.tr

The intersection graph of a group  $G$  is an undirected graph without loops and multiple edges defined as follows: the vertex set is the set of all proper non-trivial subgroups of  $G$ , and there is an edge between two distinct vertices  $H$  and  $K$  if and only if  $H \cap K \neq 1$  where  $1$  denotes the trivial subgroup of  $G$ . In this talk we classify all finite groups whose intersection graphs are  $K_{3,3}$ -free and overview the ideas involved for this classification.

MSC2000: 20D15, 20D25, 05C25.

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