ON THE RELATIONAL COMPLEXITY FOR FINITE PRIMITIVE ALMOST SIMPLE GROUPS

About 20 years ago, motivated by questions in model theory, Cherlin introduced the notion of the relational complexity of a permutation group. This is a positive integer which, roughly speaking, gives an indication of how easily the group G can act homogeneously on a relational structure. The main result about this invariant is a conjecture by Cherlin which concerns primitive permutation groups with relational complexity equal to 2.

In this talk, we will discuss some progress towards a classification of the primitive permutation groups with "large" relational complexity, with particular interest to the almost simple groups of Lie type.