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On Cherlin's Conjecture for finite binary permutation groups

Abstract

In 2000, motivated by questions in model theory, Cherlin formulated a conjecture about finite BINARY permutation groups. Roughly speaking, a permutation group is binary if, by studying its action on pairs of points, one can deduce full information about the action. Cherlin's conjecture asserts that all such permutation groups are known. I will describe recent work with Francis Hunt (South Wales) and Pablo Spiga (Milano-Bicocca) that contribute towards a proof of Cherlin's conjecture. Our work makes use of the Classification of Finite Simple Groups, so I will also discuss this classification a little.