

Derangements in permutation groups

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Abstract

A derangement is a permutation of the set Ω that leaves no element of Ω fixed. The study of derangements in permutation groups has an old and rich history dating back to at least the work on Pierre de Montmort in 1708. A classical result of Jordan shows that every finite transitive permutation group contains a derangement. Two natural questions to then investigate are the number of derangements and the existence of derangements with special properties. In this talk I will survey the research into these two questions.

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