

**Burness, Timothy C.; Tong-Viet, Hung P.**

**Derangements in primitive permutation groups, with an application to character theory.**

(English) [Zbl 1335.20001](#)

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Let  $G$  be a transitive permutation group on a finite set  $S$  of size at least 2. An element  $x$  of  $G$  is called a derangement if it acts fixed point freely on  $S$ . In the paper under review the authors study the number of conjugacy classes of derangements in  $G$ . In particular they classify finite transitive permutation groups with a single conjugacy class of derangements. They also give stronger results on finite almost simple primitive permutation groups according to their conjugacy class number.

Reviewer: [Mohammad-Reza Darafsheh \(Tehran\)](#)

**MSC:**

[20B15](#) Primitive groups

[20C15](#) Ordinary representations and characters

[20E45](#) Conjugacy classes for groups

[20D60](#) Arithmetic and combinatorial problems involving abstract finite groups

Cited in **1** Review  
Cited in **6** Documents

**Keywords:**

transitive permutation groups; derangements; primitive permutation groups; characters; numbers of conjugacy classes; finite almost simple groups

**Full Text:** [DOI](#) [arXiv](#)