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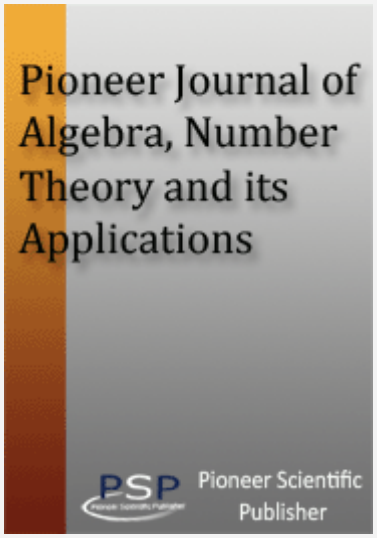

THE AMBIVALENT CONJUGACY CLASSES OF ALTERNATING GROUPS

Shuker Mahmood and Andrew Rajah

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Abstract

G. James [The Representation Theory of the Symmetric Group, Addison-Welsey Publishing, Cambridge University Press, 1984] proved that the conjugacy classes $C^{\alpha^{\mp}}$ of the alternating group A_n are ambivalent iff the number of parts α_i of α with the property $\alpha_i \equiv 3 \pmod 4$ is even. In this paper, we prove that the conjugacy classes $C^{\alpha^{\mp}}$ of A_n are ambivalent if $4|(\alpha_i - 1)$ for each parts α_i of α.

Keywords and phrases: alternating groups, conjugacy classes, permutations, ambivalent groups, cycle type.