



Algebra and Number Theory Seminar

Title: On the Involution Module of $\mathrm{PSL}(n, 2^f)$

Speaker: Lars Pforte (NUI Maynooth)

Date: Mon 28th January 2008 at 4:00PM

Location: Mathematical Sciences Seminar Room

Abstract: For any finite group G the set $I(G)$ of involutions in G is a G -set under conjugation. Let k be an algebraically closed field of characteristic 2. We refer to the resulting G -permutation module $kI(G)$ as the permutation module of G . In this talk I will present some work on the involution module of the projective special linear group over a finite field of characteristic 2. Using inflation we will see that it is enough to focus on the involution module of the special linear group. I will introduce this module and using a theorem by M. Broue I want to determine the number of its components by examining which 2-groups are vertex of how many components. In small cases we will obtain a complete result.

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