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**Hung Ngoc Nguyen, Hung P. Tong-Viet and Thomas P Wakefield\***

(tpwakefield@ysu.edu), Department of Mathematics and Statistics, Youngstown State University, One University Plaza, Youngstown, OH 44555. *Projective special linear groups  $PSL_4(q)$  are determined by the set of their character degrees.*

In the late 1990s, Bertram Huppert conjectured that if  $G$  is a finite group and  $H$  a finite nonabelian simple group such that the sets of character degrees of  $G$  and  $H$  are the same, then  $G \cong H \times A$ , where  $A$  is an abelian group.

Huppert verified the conjecture for many nonabelian simple groups, including many of the sporadic simple groups. There has been much interest and progress in the verification of this conjecture for families of simple groups of Lie type of rank two, the remaining sporadic simple groups, and alternating groups of low rank. In this presentation, we discuss arguments to confirm the conjecture for the family of projective special linear groups  $PSL_4(q)$  for  $q \geq 13$ . (Received June 18, 2012)