

Meeting: 1003, Atlanta, Georgia, SS 8A, AMS Special Session on Modular Representation Theory of Finite and Algebraic Groups, I

1003-20-622 **Jon F. Carlson, Nadia P. Mazza*** (nmazza@math.uga.edu) and **Daniel K. Nakano.**

Endo-trivial modules for finite groups of Lie type.

Endo-trivial modules were first defined by E. Dade for finite p -groups. He noted that they can be considered as the “bricks” of the endo-permutation modules, which are sources of simple modules for many finite groups. Moreover, modulo an equivalence relation, the endo-trivial modules form a finitely generated abelian group. Recently, J. Carlson and J. Thévenaz have given a complete classification of these modules. In this joint work, we generalize the notion of endo-trivial module to arbitrary finite groups. Then we attempt to classify them (up to equivalence) in the particular case of finite groups of Lie type. (Received September 24, 2004)