Block Coverings in Finite Groups

ZHANG Jiping, *Beijing University*

Abstract

We say that a finite group $G$ is principally covered if any irreducible complex character of $G$ lies in the principal $p$-block of $G$ for some prime $p$. It has been conjectured that if $G$ is principally covered then either $G$ has only one $p$-block for some prime $p$ or the Fitting subgroup of $G$ is trivial. In this talk we confirm the conjecture, we also almost determine the generalized Fitting subgroup of $G$. This is a joint work with C. Bessenrodt.