

# Finite groups with splitting automorphisms

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**Abstract:** Thompson proved that a finite group with a fixed point free automorphism of prime order is nilpotent. Kegel proved the same result for splitting automorphisms of prime order. Problems about splitting automorphisms of finite solvable groups are studied by Jabara, Kurzweil, Meixner and Khukhro. In this talk we will prove the following results:

**Theorem. (E.)** A finite group with a splitting automorphism of odd order is solvable.

**Theorem:(E. - Gupta)** For any  $n \in \mathbb{N}$ , a finite group with a splitting automorphism of order  $2^n$  is solvable.

**Date :** Wednesday, November 11, 2015

**Time:** 2pm

**Place:** TB 250, Boğaziçi University