Character theory of Finite Groups: Problems and Conjectures

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Abstract

Ordinary character theory of finite groups has played important role in the abstract theory of finite groups since its invention by G. Frobenius and pioneering researches of I. Schur, W. Burnside and R. Brauer in early twentieth century. Because of its rich content and useful applications in science related disciplines, fundamental structural theorems about finite groups were proved using character theory. But, due to further developments of the subject new conjectures and challenging problems came to existence where still resist complete solution and group theorists try to find new ideas to settle these. In this talk our aim is to explain a few of these conjectures and problems which are in the center of research on character theory of finite groups.