

First Joint Meeting Brazil Italy of Mathematics

Special Session: Group Theory

Rio de Janeiro, August 29 - September 02, 2016

Title: On the character degree graphs of finite groups

Author: Emanuele Pacifici

Abstract: Given a finite group G , let $\text{Irr}(G)$ denote the set of irreducible complex characters of G , and $\text{cd}(G)$ the set of degrees of the characters in $\text{Irr}(G)$. As many results in the literature show, there is a deep interplay between the group structure of G and the arithmetical structure of $\text{cd}(G)$, and a useful tool in this context is to attach some particular graphs to the set $\text{cd}(G)$. The aim of this talk is to present some new results concerning this subject; in particular, we will focus on finite solvable groups and on some feature of their prime character degree graphs.