Solvable groups whose character degree graphs have non-trivial fundamental groups

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Abstract

In this talk, we introduce the character degree graph of a finite group G. We will discuss various properties of this graph, and we will further discuss what graphs can occur as the character degree graphs of finite solvable groups. In particular, we focus on groups with characters of degree pq, pr, and qr, where p, q, and r are distinct primes. Although some group theory will be assumed, knowledge of the results of character theory should not be necessary.