

1136-20-551

Radha Kessar*, Department of Mathematics, City, University of London, Northampton Square, London, EC1V0HB, United Kingdom. *Rationality of blocks of finite simple groups.*

Let G be a finite group and p a prime number. The modular group algebra $\bar{\mathbb{F}}_p G$ decomposes uniquely into a product of indecomposable factors, the *blocks* of kG . We are interested in the following question. Given a block B what is the minimal finite subfield F of $\bar{\mathbb{F}}_p$ such that B has an F -form? The finiteness conjectures of block theory predict that the size of F is locally controlled. In her PhD thesis, Niamh Farrell provided evidence of a much stronger phenomenon: for blocks of finite simple groups, there should be an absolute bound on the size of F . I will report on recent results around this theme (joint work with Farrell). (Received January 22, 2018)