Fusion systems defined on p-groups with p an odd prime

Chris Parker

Given a prime p, a group G and Sylow p-subgroup S of G, the saturated fusion systems determined by G on S captures all the information about conjugacy of subgroups and elements of S in G. In general a saturated fusion system is a category which encapsulates all the properties one would expect if the fusion system came from a group as just described. However there exist saturated fusion systems which do not come from groups. Such systems are called exotic fusion systems. For odd primes p, there are many families of exotic fusion systems. In this talk, I will describe some of these families and also present results whose aim is to understand how these fusion systems come about.

University of Birmingham, United Kingdom

E-mail address: c.w.parker@bham.ac.uk