Classifying saturated fusion systems over 2-groups

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Abstract

The notions of abstract fusion systems and linking systems over a p-group S generalize those associated to a finite group, and have importat applications in Algebraic Topology and Respresentation Theory. In the talk, we will give an overview of the relevant concepts, including the notions of critical and F-essential subgroups, which play a crutial role in defining fusion systems. Then we will present a systematic procedure to find those subgroups of S and how to determine all nonconstrained centerfree fusion systems over S. We will also apply these methods to some examples.

This is joint work with Bob Oliver (Universit Paris 13).