Boğaziçi
MATH COLLOQUIUM

Minimal characteristic bisets of fusion systems

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Abstract:

Fusion theory is the study of the structure of finite groups from the point of view of a fixed prime number. It connects the worlds of finite groups, algebraic topology, and modular representation theory. In this talk, we will be introduced to the notion of a fusion system–an organizing framework for a group's p-local data and a sort of algebraic object in its own right. We will also discuss the Martino-Priddy conjecture, one of the highlights of the field, which serves as a bridge between algebra and topology. In the course of outlining the proof of this conjecture, we will see the need for an object that contains the same data as the fusion system but is more structured in a way that allows us to mimic fundamental group-theoretic constructions in an "elementwise" fashion. One such structure is the minimal characteristic biset of the fusion system, whose characterization and basic properties are the result of joint work with Sune Reeh. We will conclude with a survey of these results and consider some open questions they raise.

Date : Wednesday, November 04, 2015
Time: 14:00
Place: TB 250, Boğaziçi University