

# Topology Seminar

**Sune Reeh**

of MIT will be speaking on

## Minimal characteristic bisets for fusion systems

on November 24 at 4:30 in  
MIT Room 2-131

Every finite group  $G$  gives rise to a saturated fusion system consisting of a Sylow  $p$ -subgroup  $S$  plus some additional conjugation structure coming from the larger group  $G$ . Instead of having  $G$  act on  $S$ , we can consider  $G$  as an  $(S,S)$ -biset and ask what properties it has in relation to the fusion system. The resulting notion of characteristic bisets makes sense for abstract fusion systems as well, and such characteristic bisets were originally used by Broto-Levi-Oliver to define a classifying spectrum for every saturated fusion system. In joint work with Matthew Gelvin we give a classification of all characteristic bisets for a given saturated fusion system  $F$  and show that there is a unique minimal one  $\lambda_F$  contained in all others. We describe the structure of  $\lambda_F$  and the close relation between  $\lambda_F$  and other important concepts in the theory of fusion systems, such as for instance the linking system used to construct the classifying space of  $F$ .