Algebra and Number Theory Seminar

Fusion system and classifying spaces

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Abstract: Given a finite group, one can form its classifying space, and then its reduced integral cohomology. This cohomology is a finite abelian group in each degree and so is a product of its p-primary components, as p ranges over the prime divisors of the group order. There are corresponding "p-local" constructions at the group and space level that reflect the p-primary part of group cohomology. At the level of the group, one is led to a category called the p-fusion system. At the space level, one has p-completion in the sense of Bousfield and Kan. That these two constructions preserve essentially the same data is known as the Martino-Priddy conjecture, which was first proved in 2004 (p odd) and 2006 (p=2) by B. Oliver. I'll give an introduction to fusion systems and the broad outline of a proof of a generalization of this conjecture, due to A. Chermak, B. Oliver, and G. Glauberman and myself.

Friday, November 6, 2015, 3:00 pm
Mathematics and Science Center: E406

Mathematics and Computer Science
Emory University