RUTGERS
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Mathematics Colloquium

Blocks of finite groups and their deformations over complex K-theory.

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Abstract

Let G be a finite group. An action of G on an abelian group is called a G-module. If you reduce or complete at a prime p, the theory of G-modules breaks up into what Brauer called "blocks," with no interaction between the different blocks. When p is large a block is just an irreducible representation of G. For primes dividing G a block usually contains many irreducible representations, and whatever you can build out of them. These days the subject of blocks is organized with homological algebra: to each block one attaches a triangulated category, or perhaps that category just is the block. I will explain some of this subject, and discuss how it changes – "deforms" is an appropriate word – when you replace abelian groups by KU-modules, i.e. by modules over the complex K-theory spectrum.

Wednesday, 28 September 2016, 4pm

Smith Hall 204

Tea and refreshments will be served at 3:45pm.