

Algebra/Topology Seminar

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RESOLUTIONS OF THE $K(2)$ -LOCAL SPHERE SPECTRUM

Thursday, December 4, 2014
1:15 p.m. in ES-143

ABSTRACT. Computing the stable homotopy groups of spheres is a long-standing problem in algebraic topology. I will begin by introducing the subject of chromatic homotopy theory which describes the homotopy of the p -local sphere spectrum S through a family of localizations $L_{K(n)}S$ with respect to Morava K-theories $K(n)$. I will discuss computational tools which arise from the theory of formal group laws and their deformations. Then I will specialize to the $K(2)$ -local category and talk about finite resolutions of the $K(2)$ -local sphere spectrum by a sequence of spectra and some recent computations.