

“The reader may expect me to say something about “double coset formulae”. I shall indeed; I advise you to avoid them.”

— J.F. Adams

The Trivial Notions Seminar
Proudly Announces

Thomason’s étale descent theorem in
algebraic K-theory

A talk by
Akhil Mathew

Abstract

To a variety X we can associate the Grothendieck group $K_0(X)$ of vector bundles on X . $K_0(X)$ is only the zeroth piece of an entire collection of K-groups $K_i(X)$ for $i \geq 0$, as constructed by Quillen, and which are the homotopy groups of an algebraic K-theory spectrum $K(X)$. One might hope to compute algebraic K-theory in a similar manner as topological K-theory, via an Atiyah-Hirzebruch style spectral sequence starting from étale cohomology.

Unfortunately, this does not work because algebraic K-theory does not satisfy étale descent. However, a theorem of Thomason shows that after a type of “periodic” localization, algebraic K-theory does satisfy étale descent and there is a corresponding spectral sequence. In this talk, I’ll explain the machinery of “periodic” localizations of spectra and some of the ingredients that go into Thomason’s theorem.

Thursday, November 12th, at 1:00 pm
Science Center 222