TOPOLOGY SEMINAR

Guest Speaker: Leanne Merrill
University of Oregon

Date: Wednesday, November 9, 2016
Time: 3:00 PM
Location: 138 DeBartolo Hall

Lecture Title:
Algebraic v_n self maps at the prime 2

Abstract

A central question of algebraic topology is to understand homotopy classes of maps between finite cell complexes. The Nilpotence Theorem of Hopkins-Devinatz-Smith together with the Periodicity Theorem of Hopkins-Smith describes non-nilpotent self maps of finite spectra. The Morava K-theories $K(n)$ are extraordinary cohomology theories which detect whether a finite spectrum X supports a v_n-self map. Such maps are known to exist for each finite spectrum X for an appropriate n but few explicit examples are known. Working at the prime 2, we use a technique of Palmieri-Sadofsky to produce algebraic analogs of v_n maps that are easier to detect and compute. We reproduce the existence proof of Adamss v_1^4 map on the Mod 2 Moore spectrum, and work towards a v_2^i map for a small value of i.

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