

Speaker: Agnes Beaudry
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Monday, April 20, 2015

3:00 pm

Room: 258 Hurley Hall

Title: The Chromatic Splitting Conjecture at $n = p = 2$

Abstract:

In its strongest form, the chromatic splitting conjecture gives a precise description of the homotopy type of $L_1L_{K(2)}S$, which has been shown to hold for $p \geq 5$ by Hopkins and for $p = 3$ by Goerss, Henn and Mahowald. In this talk, I will explain why this description cannot hold at the prime $p = 2$. More precisely, let $V(0)$ be the mod 2 Moore spectrum. I will give a summary of how one uses the duality resolution techniques to show that $\pi_k L_1L_{K(2)}V(0)$ is not zero when k is congruent to 5 modulo 8. I will explain how this contradicts the decomposition of $L_1L_{K(2)}S$ predicted by the chromatic splitting conjecture.