

Topology Seminar

Eva Belmont

of MIT will be speaking on

Localization at b_{10} in the stable category
of comodules over the Steenrod reduced
powers

on April 30 at 4:30 in
MIT Room 2-131

Chromatic localization can be seen as a way to calculate a particular infinite piece of the homotopy of a spectrum. For example, the (finite) chromatic localization of a p -local sphere is its rationalization, and the corresponding chromatic localization of its Adams E_2 page recovers just the zero-stem. We study a different localization of Adams E_2 pages for spectra, which recovers more information than the chromatic localization. This approach can be seen as the analogue of chromatic localization in a category related to the derived category of comodules over the dual Steenrod algebra, a setting in which Palmieri has developed an analogue of chromatic homotopy theory. We work at $p = 3$ and compute the E_2 page and first nontrivial differential of a spectral sequence converging to $b_{10}^{-1}Ext_P^*(\mathbb{F}_3, \mathbb{F}_3)$ (where P is the Steenrod reduced powers), and give a complete calculation of other localized Ext groups, including $b_{10}^{-1}Ext_P^*(\mathbb{F}_3, \mathbb{F}_3[\xi_1^3])$.

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