Toplogy Seminar

J.D. Quigley

of Cornell will be speaking on

The motivic

$kq$-resolution

on October 21 at 4:30 in
MIT Room 2-131

(Joint work with Dominic Culver) Let $kq$ denote the very effective cover of Hermitian K-theory. The $kq$-based motivic Adams spectral sequence, or $kq$-resolution, is a motivic analog of Mahowald’s $bo$-resolution. We applied the $kq$-resolution in the $C$-motivic setting to calculate the $\eta$-periodic stable stems (recovering results of Andrews, Guillou, Isaksen, and Miller) and $v_1$-periodic stable stems. I will summarize these calculations and discuss work in progress towards analogous results over general base fields and in the $C_2$-equivariant setting. In addition to large-scale calculations of periodic phenomena, the $kq$-resolution can be used to calculate low-dimensional 2-complete Milnor-Witt stems. I will present some calculations in the $C$- and $R$-motivic settings (recovering results of Dugger-Isaksen), then discuss work in progress towards analogous results over general base fields and the 2-complete version of calculations of Röndigs-Spitzweck-Østvaer.

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