

# Topology Seminar

**Jared Weinstein**

of Boston University will be speaking on

## The rational homotopy groups of the $K(n)$ -local sphere

on November 6 at 4:30 in  
MIT Room 2-131

We compute the rational homotopy groups of the  $K(n)$ -local sphere for all heights  $n$  and all primes  $p$ , verifying a prediction that goes back to Morava in the early 1970s. The key ingredients are (1) the Devinatz-Hopkins spectral sequence, (2) the isomorphism between the Lubin–Tate tower and the Drinfeld tower at the level of perfectoid spaces, (3) integral  $p$ -adic Hodge theory, and (4) an integral refinement of a theorem of Tate on the Galois cohomology of non-archimedean fields. This is joint work with Tobias Barthel, Tomer Schlank, and Nathaniel Stapleton.