

# Topology Seminar

**Jack Ullman**

of MIT will be speaking on

## The regular slice spectral sequence

on April 1 at 4:30 in  
MIT Room 2-131

The equivariant slice spectral sequence was introduced by Hill, Hopkins and Ravenel in their solution of the Kervaire invariant problem, and is rapidly becoming an important computational tool in equivariant stable homotopy theory. In this talk, I will describe new results on a variant called the regular slice spectral sequence (or RSSS). I will explain how geometric fixed point and norm functors interact with the slice filtration, giving a Leibniz formula for the latter. I will then use Brown-Comenetz duality to relate the RSSS to the homotopy orbit and homotopy fixed point spectral sequences. Next, I will use model theory to obtain Toda bracket operations in the RSSS. Finally, I will use some of these tools to obtain a formula for the slice tower of a cofree spectrum, prove real Bott periodicity and prove a special case of the Atiyah-Segal completion theorem.