November 1: David Treumann (Northwestern), "Smith theory and geometric Hecke algebras." Followed by dinner.

In 1960 Borel proved a "localization" result relating the rational cohomology of a topological space X to the rational cohomology of the fixed points for a torus action on X. This fact and its generalizations are used constantly in Lie theory. In 1940, P.A. Smith proved a similar localization result relating the mod p cohomology of X to the mod p cohomology of the fixed points for a $\mathbb{Z}/p\mathbb{Z}$-action on X. I will discuss $\mathbb{Z}/p\mathbb{Z}$-localization on loop groups, and how it is related via the geometric Satake correspondence to some special homomorphisms that exist between algebraic groups over fields of small characteristic.