

Topology Seminar

Asaf Horev

of Stockholm University will be speaking on

Integrating the Tate Diagonal

on October 18 at 4:30 in
MIT Room Zoom

Abstract: Factorization homology is a natural invariant of manifolds and E_n -algebras. This talk is about an equivariant version of factorization homology, where the manifolds algebras and resulting invariants all admit a finite group action. We will use this theory to relate the following perspectives on topological Hochschild homology: (1) Topological Hochschild homology is an invariant of E_1 -algebras. A similar invariant can be defined in any nice symmetric monoidal ∞ -category, for example as factorization homology over the circle. (2) Topological Hochschild homology admits cyclotomic structure, given by cyclotomic Frobenius maps in the sense of Nikolaus-Scholze. This additional structure is endemic to the category of spectra. In the talk I will review factorization homology and its equivariant extension, and describe a geometric construction of the cyclotomic Frobenius maps of topological Hochschild homology, using genuine equivariant factorization homology to integrate the Tate diagonal over the circle.