Topology Seminar

Cary Malkiewich

of University of Illinois Urbana-Champaign will be speaking on

Duality in topological Hochschild homology (THH)

on October 5 at 4:30 in
MIT Room 2-131

Topological Hochschild homology (THH) is a beautiful and computable invariant of rings and ring spectra. In this talk, I will focus on the ring spectrum DX, and discuss a few different aspects of $THH(DX)$. For example, it splits when X is a suspension, and we can use this for computations in topological cyclic homology. I will also recall the "Atiyah duality" between $THH(DX)$ and the free loop space LX, and prove that this duality preserves the genuine S^1-structure. This uses the new "norm" model of THH, and a surprising technical result about orthogonal G-spectra. If there is time, I will apply these tools once more and describe an enrichment of the character map from representation theory.