

TOPOLOGY SEMINAR

Guest Speaker: Adela YiYu Zhang
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Date: Tuesday, October 4, 2022

Time: 2:15 PM

Location: 117 Hayes-Healy Hall

Zoom Link: NA



Lecture Title:

Mod p homology of labeled configuration spaces via spectral Lie algebras

Abstract

Labeled configuration spaces $B_k(M; X)$ of a manifold M with labels in a spectrum X generalize the notion of unordered configuration spaces $B_k(M) = B_k(M; S^0)$. Knudsen identified labeled configuration spaces in M with the topological Quillen objects of certain spectral Lie algebras. This allows us to extract information about the mod p homology of $B_k(M; X)$ using a bar spectral sequence and power operations on spectral Lie algebras, following the work of Knudsen on the rational homology of $B_k(M; X)$ and Brantner-Hahn-Knudsen on their Morava E-theory. In this talk, I will explain how to compute the E^2 -page of this bar spectral sequence via a May spectral sequence when $p = 2$. Time permitting, I will talk about ongoing work with Andrew Senger on detecting higher differentials via deformation of comonads.