



# TOPOLOGY SEMINAR

## Twisted homology operations

By

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**Abstract:** In the 70s, Fred Cohen and Peter May gave a description of the mod  $p$  homology of a free  $E_n$ -algebra in terms of certain homology operations, known as Dyer-Lashof operations, and the Browder bracket. These operations capture the failure of the  $E_n$  multiplication to be strictly commutative, and they prove useful for computations. After reviewing the main ideas from May and Cohen's work, I will discuss a framework to generalize these operations to homology with certain twisted coefficient systems and give a complete classification of twisted operations for  $E_{\infty}$ -algebras. I will also explain computational results that show the existence of new operations for  $E_2$ -algebras.

**Date:** Mar 8, 2021

**Time:** 13:30 UTC+3

**Place:** Zoom

To request the event link, please send a message to [cihan.okay@bilkent.edu.tr](mailto:cihan.okay@bilkent.edu.tr)