

## ***TOPOLOGY SEMINAR***

**Guest Speaker: Chloe Avery**  
**University of Chicago**

**Date:** Tuesday, April 27, 2021

**Time:** 2:30 PM

**Location:** Zoom

**Zoom Link:** [notredame.zoom.us/j/97262637721](https://notredame.zoom.us/j/97262637721)



***Lecture Title:***  
**Stable Torsion Length**

***Abstract***

The stable torsion length in a group is the stable word length with respect to the set of all torsion elements. We show that the stable torsion length vanishes in crystallographic groups. We then give a linear programming algorithm to compute a lower bound for stable torsion length in free products of groups. Moreover, we obtain an algorithm that exactly computes stable torsion length in free products of finite abelian groups. The nature of the algorithm shows that stable torsion length is rational in this case. As applications, we give the first exact computations of stable torsion length for nontrivial examples.