Department of Mathematics
University of Notre Dame

Rachel Skipper - Ohio State University

TOPOLOGY SEMINAR

Guest Speaker: Rachel Skipper
Ohio State University

Date: Tuesday, November 19, 2019
Time: 2:30 PM
Location: 258 Hurley Hall

Lecture Title:
Finiteness Properties of Simple Groups

Abstract

Talk 1: Finiteness Properties of Simple Groups
Abstract: A group is said to be of type F_n if it admits a classifying space with compact n-skeleton. We will consider the class of Röver-Nekrachevych groups, a class of groups built out of self-similar groups and Higman-Thompson groups, and use them to produce a simple group of type F_{n-1} but not F_n for each n. These are the first known examples for $n \geq 3$. As a consequence, we find the second known infinite family of quasi-isometry classes of finitely presented simple groups. This is joint work with Stefan Witzel and Matthew C. B. Zaremsky

Talk 2: Brown's Criterion for finiteness properties
Abstract: We will discuss a criterion developed by Brown for showing a group is of type F_n. We will focus mostly on the class of Braided Higman-Thompson groups and see how understanding geometric properties of certain subcomplexes of the curve complex of a punctured surface helps to prove finiteness properties for these groups. This is joint work with Xiaolei Wu