

GRADUATE STUDENT SEMINAR

Guest Speaker: Connor Malin

University of Notre Dame

Date: Tuesday, February 21, 2023

Time: 4:00 PM

Location: 258 Hurley Hall

Zoom URL: notredame.zoom.us/j/93888654312



Lecture Title:

The homotopy theory of configuration spaces

Abstract

Understanding the homeomorphism types of manifolds is an ongoing problem in topology. It is difficult to apply the techniques of homotopy theory to such a problem because homotopy equivalence is a very coarse invariant. One proposed approach to study the homeomorphism class of a manifold M is to study the homotopy types of configuration spaces of M . We discuss what is known about the homotopy types of configuration spaces of manifolds and prove the counterintuitive result that after enough suspensions, the homotopy types of the configuration spaces of M are homotopy invariants of M .