Department of Mathematics
University of Notre Dame

TOPOLOGY SEMINAR

Guest Speaker: Tye Lidman

North Carolina State University

Date: Tuesday, April 30, 2024
Time: 2:30 PM
Location: 258 Hurley Bldg
Zoom Link: NA

Lecture Title:
Dehn surgery and gauge theory

Abstract

Dehn surgery is the process of removing a tubular neighborhood of a knot from a three-manifold and regluing. We use gauge theory to study various aspects of Dehn surgery. Applications include showing certain knots in three-manifolds are determined by their complements as well as proving the Cosmetic Surgery Conjecture (two surgeries on the same knot in the three-sphere cannot produce the same three-manifold) in almost all cases. This is joint work with Ali Daemi and Mike Miller Eismeier.

Tye Lidman - North Carolina State University