Department of Mathematics
University of Notre Dame

TOPOLOGY SEMINAR

Guest Speaker: Sudipta Ghosh

University of Notre Dame

Date: Tuesday, September 12, 2023
Time: 2:30 PM
Location: 258 Hurley Hall
Zoom Link: NA

Lecture Title:
Rational homology spheres and SL(2, C)

Abstract
Building on non-vanishing theorems of Kronheimer and Mrowka in instanton Floer homology, Zentner proved that if Y is a homology 3-sphere other than S^3, then its fundamental group admits a homomorphism to SL(2,C) with non-abelian image. In this talk, I will explain how to prove this result when Y is different from RP^3 and its connected sums and $H_1(Y)$ is 2-torsion. This is joint work with Steven Sivek and Raphael Zentner.

Sudipta Ghosh - University of Notre Dame