

TOPOLOGY SEMINAR

Guest Speaker: Jason Joseph
Rice University

Date: Tuesday, April 19, 2022

Time: 2:30 PM

Location: 318 DeBartolo Hall

Zoom Link: notredame.zoom.us/j/97262637721



Jason Joseph - Rice University

Lecture Title:

Bridge numbers and meridional ranks of knotted surfaces and welded knots

Abstract

The meridional rank conjecture (MRC) proposes that the meridional rank of a knot is equal to its bridge number. In this talk we show that when the MRC holds for a knot K , it often holds for certain knotted surfaces and welded knots derived from K as well. In another direction, we examine the behavior of meridional rank of knotted spheres under connected sum, and show that any value in between the theoretical limits can be achieved. Thus either the MRC is false for knotted spheres, or their bridge numbers also collapse. This is joint work with Puttipong Pongtanapaisan.