



BGSU[®]

Department of
**Mathematics and
Statistics**

BOWLING GREEN STATE UNIVERSITY

Weekly Calendar – Spring Semester 2025

Week 12, March 31 – April 4

Monday, March 31	
Tuesday, April 1	<p>Graduate Student Seminar 11:00am – 11:45am, McLeod 459 Speaker: Nick Long Topic: Frobenius Reciprocity of Representations of the Symmetric Group</p> <p>Foundational Math Committee 2:30pm – 3:30pm, McLeod Hall 459</p>
Wednesday, April 2	<p>Geometry and Topology Seminar 12:00pm – 1:00pm, via Zoom link TBA Speaker: Daniel Levitin, University of Wisconsin Title: Left-invariant Riemannian distances on higher-rank Sol-type groups</p> <p>Peer Mentor Meeting 12:30pm -1:20pm, McLeod Hall 400</p> <p>Analysis Reading Seminar 2:30pm – 3:20pm, McLeod Hall 459 Speaker: Abraham Orinda Title: Hypercyclicity of the half-angle operator, Part 3</p> <p>Peer Mentor Meetings 3:30pm – 4:20pm, McLeod Hall 459, 238 & 302</p> <p>Advisory Committee 3:30pm – 4:30pm, McLeod Hall 400</p>
Thursday, April 3	
Friday, April 4	<p>Peer Mentor Seminar 3:30pm – 5:00pm, McLeod Hall 459</p>

ABSTRACT

Geometry and Topology Seminar

Title: Left-invariant Riemannian distances on higher-rank Sol-type groups

Abstract: Describing the coarse geometry of solvable groups is one of the major projects of Geometric Group Theory. One solvable group whose geometry is well-understood is Sol, a rank-1 group foliated by two families of hyperbolic planes. More generally, Le Donne, Pallier, and Xie recently described the geodesics in Sol-type groups, which are the rank-1 solvable groups foliated by a pair of negatively-curved spaces. Leveraging this description, they show that all left-invariant Riemannian distances on a Sol-type group are roughly similar. In this talk, I will describe the coarse geometry of the broader class of higher-rank Sol-type groups, and discuss my generalization of Le Donne-Pallier-Xie's result to certain distances on these groups. I will discuss the fact that, in higher rank, the foliations give rise to less useful distance bounds than in rank 1, and introduce a technique I call curve surgery, which I use to describe a family of rough geodesics that is good enough to generalize Le Donne-Pallier-Xie's result.