BGSU Department of **Mathematics and Statistics**

BOWLING GREEN STATE UNIVERSITY

Weekly Calendar – Fall Semester 2024
Week 10 – October 28 – November 1

Monday, October 28	**Putnam Meeting** 11:30am – 12:20pm, McLeod Hall 459 **Advisory Committee** 1:30pm – 2:30pm, McLeod Hall 400
Tuesday, October 29	**Geometry and Topology Seminar** 2:30pm – 3:30pm, zoom link TBA Speaker: Marco Linton, University of Oxford Title: The Relation Lifting and Relation Gap Problems
Wednesday, October 30	
Thursday, October 31	
Friday, November 1	**Analysis Reading Seminar** 11:30am – 12:30pm, McLeod Hall 459 Speaker: Abraham Orinda Title: Ergodic Theory and Linear Dynamics, Part 2 **Colloquium** 3:45pm – 5:00pm, via Zoom: Speaker: Dr. Russell J. Bowater, Independent Statistical Consultant, Oaxaca City, Mexico Zoom: https://bgsu-edu.zoom.us/j/89297747067?pwd=9Zu4zgMNMfLs8DRJFFUPYLtsyc6lt3.1 Meeting ID: 892 9774 7067; Passcode: 402743 Title: The 7 Hardest Lessons to Learn in Statistics

ABSTRACTS

Geometry and Topology Seminar

Title: The Relation Lifting and Relation Gap Problems

Abstract: If G = F/N is a presentation of a group, the abelianisation of N can be considered as a module over the group ring known as the relation module. Normal generators of N project to generators of the relation module, but whether relation module generators come from normal generators of N is known as the relation lifting problem. Dunwoody provided an example, a one-relator group with torsion, where relation lifting is not possible in the 70's. However, the slightly weaker problem of whether a finite presentation can have fewer relation module generators than relations, the relation gap problem, remains open and is closely tied to old conjectures on the homotopy types of 2-complexes such as Wall's D(2) problem. In this talk, I will motivate these problems and present a relation lifting result which has the following corollary: if G = F/N is right orderable and has cyclic relation module, then G is a one-relator group and so has no relation gap.

Colloquium

Title: The 7 Hardest Lessons to Learn in Statistics

Abstract: What is the current state of the theory of statistical inference? Is it essentially in a good state except for a relatively small number of issues that need to be tidied up? Or is what is usually presented as being the standard and accepted theory of statistical inference so full of conceptual holes that it is nothing short of an embarrassment for anyone who wishes to describe themselves as a statistician? This talk explores these questions by presenting lessons that arguably need to be learnt but have proved difficult to learn for reasons that to a great extent are not related to doing good independent and impartial science. By exposing ourselves to such an uncomfortable level of introspection, a greater understanding can be gained about what we have done, where we are at and where we should be going.