



BGSU

Department of
**Mathematics and
Statistics**

BOWLING GREEN STATE UNIVERSITY

**Weekly Calendar – Fall Semester 2024
Week 12 – November 11 – November 15**

Monday, November 11	Veterans Day No Classes
Tuesday, November 12	Graduate Student Seminar 11:30am – 12:15pm, McLeod Hall 459 Speaker: Nick Long Title: Homotopy Groups of the Configuration Space Geometry and Topology Seminar 4:00pm – 5:00pm, zoom link TBA Speaker: MurphyKate Montee, Carleton College Title: Random Quotients of Free Products of Groups
Wednesday, November 13	
Thursday, November 14	
Friday, November 15	Analysis Reading Seminar 11:30am – 12:30pm, McLeod Hall 459 Speaker: Abraham Orinda Title: Ergodic Theory and Linear Dynamics, Part 4

ABSTRACTS

Geometry and Topology Seminar

Title: Random Quotients of Free Products of Groups

Abstract: This is joint work in progress with Eduard Einstein, Suraj Krishna M S, Thomas Ng, and Markus Steenbock.

The Gromov density model of random groups is an influential family of groups which, in some sense, describe typical behavior of infinite groups. Of particular interest to this talk are density bounds that imply hyperbolicity, cubulation, and Property (T). Recent work has extended this model to investigate random quotients of hyperbolic groups and cubulated groups. In this talk we introduce a density model for random quotients of a free product of finitely generated groups, and investigate the relative geometry of these groups. In particular we show that in this model, at $d < 1/2$ with high probability factor groups embed in the random quotient, and the random quotient is hyperbolic relative to its factor groups. At $d < 1/6$ the random quotient is cubulated relative to its factor groups, and if we assume that the factor groups are cubulated then the random quotient is also cubulated.