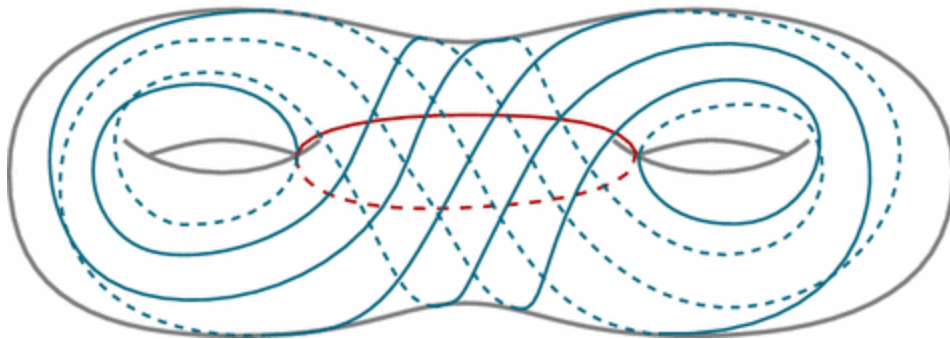# REU: Curves on Surfaces

Who we are: The project organizer of this REU is Professor Dan Margalit from the Georgia Institute of Technology whose research is focused on the mapping class group and the braid group. The project leaders for this REU are Wade Bloomquist, Nancy Scherich, and Yvon Verberne. Wade and Yvon are postdocs at the Georgia Institute of Technology, and Nancy is a postdoc at the University of Toronto.

Project description: The mapping class group is an example of a mathematical object in the intersection of algebra and topology. This offers us the flexibility of studying these objects using a wide range of techniques from both fields. Throughout this REU, we will be researching the topics of mapping class groups, braid groups and curves on surfaces, as in the following picture.

What to expect: This REU is planned to span eight weeks from May 31, 2021 through July 23, 2021. The first week will consist of a workshop which will cover the basics of mapping class groups and braid groups. During this time, we would also like everyone to get to know the other REU participants, including Professor Margalit and the REU project leaders. Starting week two, we will split off into groups to tackle different research projects. During this time, you will meet with your project leader for approximately an hour each morning, and at the end of the week we will meet as a large group to discuss the progress made by each of the groups. A poster session will be held during the seventh week, and we aim to complete a write-up for each of the projects during the eighth week.

We will hold weekly professional development activities where the participants will learn how to write a CV, create a poster, and write personal statements. In addition, we will hold seminars to show the broad scope of current research in mapping class groups and the braid group.

For this REU, we hope to be able to hold it in person should public health guidelines allow for this. However, if for any reason you would like to participate online, this will be accommodated.