

**Spring 2022**  
**Directed Reading Program**  
**Student Talks**

Thursday, April 21, 5:30-7:30pm

Friday, April 22, 5:30-7:30pm

Saturday, April 23, 1:00-3:00pm

Via Zoom

The Ohio State University, Columbus, Ohio

## Thursday April 21, 2022

“Classification of Surfaces”

Alina Li (Mentor: Aziz Burak Gülen)

“On the Poincaré-Hopf Theorem”

Harrison Blake (Mentor: Qingsong Wang)

“Stereographic Projection”

David Kruzel (Mentor: Yilong Zhang)

“A key lemma in Morse Theory”

John White (Mentor: Matthew Carr)

“Five Color Theorem and the related Four Color Theorem”

Junyu Yuan (Mentor: Baian Liu)

“Topological Data Analysis and Football”

Rylan Roberts (Mentor: Ling Zhou)

## Friday April 22, 2022

“Two Proofs of the Prime Number Theorem”

Edward Liu (Mentor: Julian Mejia Cordero)

“The Symmetries of Möbius Maps”

Haley Scott (Mentor: Amanda Pan)

“The Metropolis-Hastings Algorithm”

John Wright (Mentor: Paul Duncan)

“Uniform Distribution Modulo 1”

Kabir Belgikar (Mentor: Bhawesh Mishra)

“Essentials of Stochastic Processes”

Nuofan Tian (Mentor: Zihao Fang)

“The Contracting Mapping Principle”

Tyler Pondel (Mentor: James Marshall Reber)

“Why Measure Theory?”

Sanjay Janardhan (Mentor: Adam Christopherson)

**Saturday April 23, 2022**

TBA

Alexis Mennona (Mentor: Stefan Nikoloski)

“An Introduction to Category Theory through Brouwer’s Fixed Point Theorem”

Jacob Monzel (Mentor: Amogh Parab)

“Category Theory”

Jason Weible (Mentor: Kyle Binder)

“Methods for statistical evaluation of data”

Matthew Chilinski (Mentor: Benjamin Call)

“Background and proof of the Chinese Remainder Theorem”

Ruoke Zhang (Mentor: Zach Davis)

“Matrix Lie groups and Lie algebras: an introduction”

Wo Wu (Mentor: Pan Yan)

## **Directed Reading Program Organizing Committee**

Ben Call

Shreeya Behera

Kyle Binder

Ivo Terek

Paul Duncan

Katelynn Huneycutt

Scott Newton

The DRP Committee would like to thank all of the graduate student mentors for their work with their undergraduate students this semester. We would also like to thank the DRP’s advisor, Dr. Dan Thompson, as well as the OSU Math Department for providing funding for this program. Any graduate student who would like to serve on the committee may talk to a current committee member. Any graduate or undergraduate student wishing to participate in the program in the fall may apply by visiting [go.osu.edu/drp](http://go.osu.edu/drp) at the beginning of next semester.