

Thursday April 20, 2023

The Weierstrass Approximation Theorem via Bernstein Polynomials

Nigel Krekeler
(Mentor: Michael Lane)

Poker Over the Phone: An Example of Mathematical Cryptography

Nathan Howe
(Mentor: Jonathan Hales)

The Invariant Subspace Problem

Yumin Shen
(Mentor: Thomas O'Hare)

Sturm's Theorem

Gabriel Black
(Mentor: Min Shi)

Riemann Surface and Complex Analysis

Christine Lyu
(Mentor: Stefan Nikoloski)

**Spring 2023
Directed Reading Program
Student Talks**

Thursday April 20, 5:30 – 7:30pm

Friday April 21, 5:30 – 7:30pm

Saturday April 22, 1:30 – 3:30pm

The Ohio State University, Columbus, Ohio

Friday April 21, 2023

Recovering a Function in \mathbb{R}^3 from its Radon Transform

Isaac Shellabarger
(Mentor: Nicholas Castillo)

The Schwarzschild Metric and Birkhoff's Theorem

Pallav Pant
(Mentor: Ivo Terek)

Exploring Machine Learning

Mark Kikta and Umar Jara
(Mentor: Aziz Burak Gülen)

Matroids and the Greedy Algorithm

Gowrav Mannem
(Mentor: Kyle Binder)

What is the Role of Intuition in Mathematics?

Anton Fediukov
(Mentor: Amogh Parab)

Saturday April 22, 2023

Wiener Process for Stock Price

Haoran Ma and Shuo Chen
(Mentor: Michael Tychonievich)

The Development of Real Numbers

Cherish Brumley
(Mentor: Amogh Parab)

Real Analysis and Baire's Category Theorem for the Real Line

Zhengyang Liu and Qiniu Shi
(Mentor: Isaac Brown)

Four Polynomials: Motivations for Combinatorial Reciprocity Theorems

Haochen Wang
(Mentor: Yang Yang)

Counting Rational Plane Curves

Jacob Monzel
(Mentor: Deniz Genlik)

Directed Reading Program Organizing Committee

Ivo Terek
Shreeya Behera
Scott Newton
Kyle Binder
Amogh Parab
James Marshall Reber

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 at the beginning of next semester.