Fall 2022
Directed Reading Program
Student Talks

Thursday, December 1st, 5:30-7:30pm
Friday, December 2nd, 5:30-7:30pm
Saturday, December 3rd, 1:00-3:00pm

The Ohio State University, Columbus, Ohio

Thursday December 1st, 2022

"A Glimpse of p-adic Analysis"
Kabir Belgikar (Mentor: Jake Huryn)

"On the Poincaré Group"
Harrison Blake (Mentor: Makana Silva)

"Statistical Learning: Approximation Methods"
Vyom Dave (Mentor: Mario Gómez)

"The Birth of Analytic Number Theory – How L-functions
arose from counting primes"
Christine Lyu & Randall Rickel (Mentor: Shifan Zhao)

"Introduction to wavelets and advantages over Fourier series"
Jack Feds (Mentor: Adam Christopherson)

Friday December 2nd, 2022

"Mathematical models in nature: the SIR model and
Lotka-Volterra's competition model"
Ryan Hardig & Yuchen Zhao (Mentor: James Marshall Reber)

"Smooth manifolds and the Frobenius theorem"
Pallav Pant (Mentor: Ivo Terek)

"Fermat's Dream: Fermat's Last Theorem for regular primes"
Alina Li & Wo Wu (Mentor: Stefan Nikoloski)

"Measure, Integration and Dominated Convergence Theorem"
Yumin Shen (Mentor: Thomas O'Hare)

"Sard's Theorem"
Steven Speck (Mentor: Alexander Goldman)

"Factorization and the Rho Method"
Aaron Yoder (Mentor: Bhawesh Mishra)

Saturday December 3rd, 2022

"Symbolic dynamics and Shannon's theory of communication"
Tong Du & Lena Zhang (Mentor: Caleb Dilsavor)

"TBD"
Pranav Jois (Mentor: Zach Davis)

"An Introduction to Algebraic Curves"
Jacob Monzel (Mentor: Deniz Genlik)

"Exploring Complex Systems: Analytic Methodologies and
Cross-Disciplinary Applications of Network Theory"
Daniel Tcheurekdjian (Mentor: Amogh Parab)

"TBD"
Yizhen Tong (Mentor: Brett Hungar)

Directed Reading Program Organizing Committee

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