

RUOXI LI

Thackeray Hall, Pittsburgh, PA

✉ rul44@pitt.edu

Education

University of Pittsburgh

Doctor of Philosophy in Mathematics

2019-2025 (Expected)

Pittsburgh, PA, United States

University of Illinois Urbana-Champaign

Master of Science in Mathematics

2016-2018

Champaign, IL, United States

Nankai University

Bachelor of Science in Mathematics and Applied Mathematics

2012-2016

Tianjin, China

Research Interests

My research focuses on algebraic geometry and representation theory. More specifically, I am interested in moduli spaces and moduli stacks of Higgs bundles and bundles with connections. Recently, I am also interested in character varieties.

Publications and preprints

- Explicit formulas for mixed Hodge polynomials of character varieties of free abelian groups, with Rahul Singh, arXiv: 2410.10008.

Projects

- (*With Prof. Roman Fedorov*) Motivic classes of stacks in finite characteristic and applications to stacks of Higgs bundles and bundles with connections.
- (*With Dr. Rahul Singh*) Motivic classes of character varieties and character stacks.

Talks and Presentations

Graduate Student Seminar

Motivic classes of varieties and stacks with applications to Higgs bundles

October 18th, 2024

Pittsburgh, PA

Algebraic Groups and the Geometric Langlands Program Seminar

Motivic classes of varieties and stacks with applications to Higgs bundles

September 24th, 2024

Pittsburgh, PA

Richmond Geometry Meeting (Poster)

Motivic classes of stacks in finite characteristic and applications to stacks of bundles with connections

August 12-14th, 2024

Richmond, VA

Online Seminar by students

Moduli of vector bundles

July-November, 2020

Teaching Experiences

University of Pittsburgh

2019-present

Lecturer, Differential Equations (MATH 0290)

SU 2024

Teaching Assistant, Business Calculus (MATH 0120)

FA 2020, 2021

Teaching Assistant, Analytic Geometry & Calculus 1 (MATH 0220)

SP 2021, 2022, 2024

Teaching Assistant, Analytic Geometry & Calculus 2 (MATH 0230)

SP 2021, SU 2021, FA 2021, 2022

Teaching Assistant, Intro Theoretical Mathematics (MATH 0413)

SU 2021

Teaching Assistant, Intro Theory 1-Variable Calculus (MATH 0420)

SP 2023

Teaching Assistant, Intro Abstract Algebraic Systems (MATH 0430)

SP 2023, 2024

Grader, Differential Equations (MATH 0290)

FA 2024

Grader, Finite Mathematics (MATH 0400)

SP 2021

Grader, Applied Elementary Number Theory (MATH 1020)

FA 2022, 2023

Grader, Combinatorial Mathematics (MATH 1050)

FA 2022, 2023

Grader, Partial Differential Equations 1 (MATH 1470)

FA 2021

Academic Services

Referee, *Pittsburgh Interdisciplinary Mathematics Review*

2024-present

Honors and Awards

Arts & Sciences Graduate Fellowship, *University of Pittsburgh*

2019

Freshman's Second Prize Scholarship, *Nankai University*

2012

Workshops and Conferences

WARTHOG workshop , <i>Eugene, OR, United States</i>	July 10-14th, 2023
Categorical methods in moduli theory , <i>Philadelphia, PA, United States</i>	April 7-9th, 2023
Workshop on Moduli, motives, and bundles , <i>online</i>	September 19-23rd, 2022
Derived FRG , <i>Ann Arbor, MI, United States</i>	July 30-August 5th, 2022
GAeL XXVIII , <i>online</i>	July 5-9th, 2021
Special Month on Singularities and K-Stability , <i>online</i>	May 17-June 11th, 2021
Overview of Springer theory , <i>online</i>	June 8-12th, 2020
Workshop on Lie Theory and Integrable Systems , <i>online</i>	June 5-7th, 2020
Warwick virtual M2 Workshop , <i>online</i>	June 1-5th, 2020
Geometry and Dynamics of Foliations , <i>online</i>	May 25-28th, 2020