

Ruoxi Li
rul44@pitt.edu
<https://ruoxi-li0351.github.io/>
Thackeray Hall, Pittsburgh, PA

Education

2019–25* **Ph.D.**, University of Pittsburgh, (Advisor: [Prof. Roman Fedorov](#))
2016–18 **M.S.**, University of Illinois Urbana-Champaign
2012–16 **B.Sc.** Nankai University

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

2024 Explicit formulas for mixed Hodge polynomials of character varieties of nilpotent groups, with [Rahul Singh](#), [arXiv: 2410.10008](#).
2024 Motivic classes of stacks in finite characteristic and applications to stacks of Higgs bundles and bundles with connections. In Preparation.

Projects

2022– (With [Prof. Roman Fedorov](#)), Motivic classes of stacks in finite characteristic and applications to stacks of Higgs bundles and bundles with connections.
2024– (With [Dr. Rahul Singh](#)), Motivic classes of character varieties and character stacks.

Presentations

Nov. 2024* Motivic classes of varieties and stacks with applications to Higgs bundles Part II, [Graduate Student Seminar](#), Pittsburgh, PA, November 22th, 2024.
Nov. 2024* Motivic classes in finite characteristic with applications to Higgs bundles and bundles with connections, [Western Algebraic Geometry Symposium](#), Tucson, AZ, November 16–17th, 2024. Poster Session.
Nov. 2024* Motivic classes in finite characteristic with applications to Higgs bundles and bundles with connections, [Algebraic Geometry Northeastern Series](#), Hanover, NH, November 8–10th, 2024. Poster Session.
Oct. 2024 Motivic classes of varieties and stacks with applications to Higgs bundles, [BUGCAT Conference](#), Binghamton, NY, October 26–27th, 2024. 20 mins Talk.
Oct. 2024 Motivic classes of varieties and stacks with applications to Higgs bundles Part I, [Graduate Student Seminar](#), Pittsburgh, PA, October 18th, 2024.
Sept. 2024 Motivic classes of varieties and stacks with applications to Higgs bundles, [Algebraic Groups and the Geometric Langlands Program Seminar](#), Pittsburgh, PA, September 24th, 2024.

* Expected.

- Aug. 2024 Motivic classes of stacks in finite characteristic and applications to stacks of Higgs bundles and bundles with connections, [Richmond Geometry Meeting](#), Richmond, VA, August 12-14th, 2024. Poster Session.
- July 2020 Moduli of Vector Bundles, Online Seminar by students, July-November, 2020.

Teaching Experiences

University of Pittsburgh

Instructor

MATH 0290 Differential Equations, SU 2024

Teaching Assistant

MATH 0120 Business Calculus, FA 2020, 2021
 MATH 0220 Analytic Geometry & Calculus 1, SP 2021, 2022, 2024
 MATH 0230 Analytic Geometry & Calculus 2, SP 2021, SU 2021, FA 2021, 2022
 MATH 0413 Intro Theoretical Mathematics, SU 2021
 MATH 0420 Intro Theory 1-Variable Calculus, SP 2023
 MATH 0430 Intro Abstract Algebraic Systems, SP 2023, 2024

Grader

MATH 0290 Differential Equations, FA 2024
 MATH 0400 Finite Mathematics, SP 2021
 MATH 1020 Applied Elementary Number Theory, FA 2022, 2023
 MATH 1050 Combinatorial Mathematics, FA 2022, 2023
 MATH 1470 Partial Differential Equations 1, FA 2021

Academic Service

2024– **Referee**, *Pittsburgh Interdisciplinary Mathematics Review*.

Honors and Awards

2019 Arts & Sciences Graduate Fellowship, University of Pittsburgh
 2012 Freshman's Second Prize Scholarship, Nankai University

Last updated: October 31, 2024