# Ruoxi Li

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## Education

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|---|---|
| **University of Pittsburgh** | **2019-2025 (Expected)** |
| *Doctor of Philosophy in Mathematics* | *Pittsburgh, PA, United States* |
| **University of Illinois Urbana-Champaign** | **2016-2018** |
| *Master of Science in Mathematics* | *Champaign, IL, United States* |
| **Nankai University** | **2012-2016** |
| *Bachelor of Science in Mathematics and Applied Mathematics* | *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.

## 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*) Explicit formulae of mixed Hodge polynomials for character varieties of free abelian groups.

- (*With Dr. Rahul Singh*) Motivic classes of character varieties and character stacks.

## Talks & Presentations

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| **Algebraic Groups and the Geometric Langlands Program Seminar** | **September 24th, 2024** |
| *Motivic classes of varieties and stacks with applications to Higgs bundles* | *Pittsburgh, PA* |
| **Richmond Geometry Meeting (Poster)** | **August 12-14th, 2024** |
| *Motivic classes of stacks in finite characteristic and applications to stacks of bundles with connections* | *Richmond, VA* |
| **Online Seminar by students** | **July-November, 2020** |
| *Moduli of vector bundles* | |

## Teaching Experiences

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|---|---|
| **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**, Finite Mathematics (MATH 0400) | **SP 2021** |
| **Grader**, Differential Equations (MATH 0290) | **FA 2024** |
| **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

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| **Referee**, *Pittsburgh Interdisciplinary Mathematics Review* | **2024-present** |

## Honors & Awards

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

## Workshops & Conferences

**WARTHOG workshop**, *Eugene, OR, United States*   **July 10-14th, 2023**

**Categorical methods in moduli theory**, *Philadelphia, PA, United States*   **April 7-9th, 2023**

**Workshop on Moduli, motives, and bundles**, *online*   **September 19-23rd, 2022**

**Derived FRG**, *Ann Arbor, MI, United States*   **July 30-August 5th, 2022**

**GAeL XXVIII**, *online*   **July 5-9th, 2021**

**Special Month on Singularities and K-Stability**, *online*   **May 17-June 11th, 2021**

**Overview of Springer theory**, *online*   **June 8-12th, 2020**

**Workshop on Lie Theory and Integrable Systems**, *online*   **June 5-7th, 2020**

**Warwick virtual M2 Workshop**, *online*   **June 1-5th, 2020**

**Geometry and Dynamics of Foliations**, *online*   **May 25-28th, 2020**