Jiantong Liu*

Information \diamond Email: jl106@illinois.edu Department of Mathematics

♦ Website: jiantongliu.github.io University of Illinois Urbana-Champaign

Urbana, IL 61801

RESEARCH Algebraic Geometry, Algebraic K-theory, Homotopy Theory.

Interest

Education University of Illinois Urbana-Champaign (UIUC) Aug 2023 - Present

Ph.D., Mathematics

University of California, Los Angeles (UCLA)

Sept 2019 - Jun 2023

B.S., Mathematics, with Departmental Highest HonorsB.S., Cognitive Science, with Specialization in Computing

Publications \diamond Bounds in Simple Hexagonal Lattice and Classification of 11-stick Knots. (With Y. Bao, A. Benveniste, M. Campisi, N. Cazet, A. Goh, E. Sherman.) J. Knot Theory Ramif.

(2023), Vol. 32, No. 14, 2350097.

Talks External

♦ Bounds in Simple Hexagonal Lattice and Classification of 11-stick Knots. AMS Special Session at Joint Mathematics Meeting, January 2023, Boston, MA.

Internal

- ♦ A Tropical Proof of the Brill-Noether Theorem. UIUC Graduate Algebraic Geometry and Commutative Algebra Seminar, September 2024.
- ♦ Étale Cohomology. UIUC Étale Cohomology Learning Seminar, June 2024.
- ♦ Descent Theory. UIUC Étale Cohomology Learning Seminar, May 2024.
- Equivariant Cohomology. UIUC Equivariant Homotopy Theory Learning Seminar, February 2024.
- ♦ Triangulated Category's Christmas Wish List. UIUC Graduate Algebraic Geometry and Commutative Algebra Seminar, September 2023.
- ♦ Enriched Categories and Applications. UCLA Directed Reading Program Colloquium, March 2022.

AWARDS UCLA Latin Honors, Magna cum laude Jun 2023

UCLA Departmental Highest Honors in Mathematics

Jun 2023

Teaching At UIUC Aug 2023 - Present

Teaching Assistant

- ♦ MATH 257, Linear Algebra with Computational Applications. (×2)
- ♦ MATH 444, Elementary Real Analysis.

Course Grader

♦ MATH 241, Calculus III.

At UCLA Sept 2020 - Sept 2022

Course Grader

♦ MATH 115AH, Upper Division Linear Algebra (Honors). (×5)

^{*}Last updated August 2024.

♦ MATH 115A, Upper Division Linear Algebra. (×2)

♦ MATH 105, Mathematics and Pedagogy for Teaching Secondary Mathematics. (×3)

At UCLA Olga Radko Endowed Math Circle

Sept 2021 - Jun 2023

Assistant Instructor for Intermediate Level

Outreach & Service

Illinois Mathematics Lab Graduate Team Leader Aug 2024 - Present

UIUC Graduate Affairs Committee

Aug 2023 - Jun 2024

Graduate Student Member

Organization for Transformative Works (OTW)

Oct 2018 - Present

Volunteer, Staff

Conferences Workshops Attended

Conferences & Life after the Telescope Conjecture, Berkeley, CA.

Dec 2024

Motivic Homotopy, K-theory, and Modular Representations, Los Angeles, CA. Aug 2024 a celebration of the mathematics of Eric Friedlander on the occasion of his 80th birthday.

SLMath Summer School on Algebraic Curves, Berkeley, CA.

Jul 2024

Algebraic Geometry Northeastern Series, Boston, MA.

Mar 2024

Symmetric Tensor Categories and Representation Theory, Los Angeles, CA.

Jan 2024

Western Algebraic Geometry Symposium, St. Louis, MO.

Nov 2023

Midwest Topology Seminar, Champaign, IL.

Sept 2023 - Oct 2023

Joint Mathematics Meeting, Boston, MA.

Jan 2023

HoTTEST Summer School, Virtual.

Jul 2022 - Aug 2022

SKILLS

Programming Languages: R, Python, Java, C++

Other Mathematical Tools: MATLAB, Lean, Agda

General Tools: WordPress, LATEX

Language: Chinese (native), English (fluent)