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 K-theory and its applications in motivic 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 Honors B.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.

SELECTED 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

- ♦ Descent of Algebraic K-theory. UIUC Graduate Student Homotopy Theory Seminar, April 2025.
- Reinterpreting Universal Localizing Invariant. UIUC Motivic Homotopy Theory Literature Seminar, April 2025.
- Categorifying Spectra. UIUC Motivic Homotopy Theory Literature Seminar, October 2024.
- ♦ A Tropical Proof of the Brill-Noether Theorem. UIUC Graduate Algebraic Geometry and Commutative Algebra Seminar, September 2024.
- ♦ How to Overcomplicate the Brill-Noether Theorem. UIUC Graduate Algebraic Geometry and Commutative Algebra Seminar, September 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 227, Linear Algebra for Data Science.
- \diamond MATH 257, Linear Algebra with Computational Applications. (\times 2)
- ♦ MATH 444, Elementary Real Analysis.

^{*}Last updated April 2025.

Course Grader

♦ MATH 241, Calculus III.

Midwest Topology Seminar, Chicago, IL.

At UCLA Sept 2020 - Sept 2022 Course Grader ♦ MATH 115AH, Upper Division Linear Algebra (Honors). (×5) ♦ MATH 115A, Upper Division Linear Algebra. (×2) \diamond MATH 105, Mathematics and Pedagogy for Teaching Secondary Mathematics. ($\times 3$) Outreach & Illinois Mathematics Lab Aug 2024 - Present SERVICE Graduate Team Leader **UIUC Math Circle** Aug 2024 - Dec 2024 Instructor **UIUC Graduate Affairs Committee** Aug 2023 - May 2024 Graduate Student Member UCLA Olga Radko Endowed Math Circle Sept 2021 - Jun 2023 Assistant Instructor for Intermediate-level Group Interactions between C^* -algebraic KK-theory and Homotopy Theory, Remote. Jan 2025 RECENTLY-ATTENDED Conferences & $Dec\ 2024$ Life after the Telescope Conjecture, Berkeley, CA. Workshops

Workshop on Tevelev Degrees and Related Topics, Champaign, IL.

Nov 2024

Oct 2024