

# Jiantong Liu\*

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| CONTACT INFORMATION | ◇ Phone: (424)440-9698<br>◇ Email: <a href="mailto:jl106@illinois.edu">jl106@illinois.edu</a><br>◇ Website: <a href="https://jiantongliu.github.io">jiantongliu.github.io</a> | 273 Altgeld Hall<br>Department of Mathematics<br>University of Illinois Urbana-Champaign<br>Urbana, IL 61801 |
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| RESEARCH INTEREST | <u>Research Area</u> : Algebraic Geometry and Homotopy Theory.<br><u>Specific Interest</u> : Algebraic K-theory and its applications in Motivic Homotopy Theory |
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| EDUCATION | <b>University of Illinois Urbana-Champaign (UIUC)</b><br>Ph.D., Mathematics | <i>Aug 2023 - Present</i> |
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|  | <b>University of California, Los Angeles (UCLA)</b><br>B.S., Mathematics, with Departmental Highest Honors<br>B.S., Cognitive Science, with Specialization in Computing | <i>Sept 2019 - Jun 2023</i> |
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| PUBLICATIONS | ◇ <i>Bounds in Simple Hexagonal Lattice and Classification of 11-stick Knots.</i> (With Y. Bao, A. Benveniste, M. Campisi, N. Cazet, A. Goh, E. Sherman.) <i>J. Knot Theory Ramif.</i> (2023), Vol. 32, No. 14, 2350097. |
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| SELECTED TALKS | <b>External</b><br>◇ <i>Bounds in Simple Hexagonal Lattice and Classification of 11-stick Knots.</i> AMS Special Session at Joint Mathematics Meeting, January 2023, Boston, MA. |
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|  | <b>Internal</b><br>◇ <i>Categorifying Spectra.</i> UIUC Motivic and K-theory Literature Seminar, October 2024.<br>◇ <i>A Tropical Proof of the Brill-Noether Theorem.</i> UIUC Graduate Algebraic Geometry and Commutative Algebra Seminar, September 2024.<br>◇ <i>How to Overcomplicate the Brill-Noether Theorem.</i> UIUC Graduate Algebraic Geometry and Commutative Algebra Seminar, September 2024.<br>◇ <i>Equivariant Cohomology.</i> UIUC Equivariant Homotopy Theory Learning Seminar, February 2024.<br>◇ <i>Triangulated Category's Christmas Wish List.</i> UIUC Graduate Algebraic Geometry and Commutative Algebra Seminar, September 2023.<br>◇ <i>Enriched Categories and Applications.</i> UCLA Directed Reading Program Colloquium, March 2022. |
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| AWARDS | UCLA Latin Honors, Magna cum laude              | <i>Jun 2023</i> |
|        | UCLA Departmental Highest Honors in Mathematics | <i>Jun 2023</i> |

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| TEACHING | <b>At UIUC</b><br>Teaching Assistant<br>◇ MATH 257, <i>Linear Algebra with Computational Applications.</i> (×2)<br>◇ MATH 444, <i>Elementary Real Analysis.</i><br><br>Course Grader<br>◇ MATH 241, <i>Calculus III.</i> | <i>Aug 2023 - Present</i> |
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|  | <b>At UCLA</b> | <i>Sept 2020 - Sept 2022</i> |
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\*Last updated December 2024.

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|                            | Course Grader  |                             |
|                            | ◊ MATH 115AH, <i>Upper Division Linear Algebra (Honors)</i> . (×5)   |                             |
|                            | ◊ MATH 115A, <i>Upper Division Linear Algebra</i> . (×2)   |                             |
|                            | ◊ MATH 105, <i>Mathematics and Pedagogy for Teaching Secondary Mathematics</i> . (×3)  |                             |
|                            | <b>At UIUC Math Circle</b>   | <i>Aug 2024 - Present</i>   |
|                            | Instructor   |                             |
|                            | <b>At UCLA Olga Radko Endowed Math Circle</b>  | <i>Sept 2021 - Jun 2023</i> |
|                            | Assistant Instructor for Intermediate Level  |                             |
| OUTREACH &<br>SERVICE      | <b>Illinois Mathematics Lab</b>  | <i>Aug 2024 - Present</i>   |
|                            | Graduate Team Leader   |                             |
|                            | <b>UIUC Graduate Affairs Committee</b>   | <i>Aug 2023 - Jun 2024</i>  |
|                            | Graduate Student Member  |                             |
|                            | <b>Organization for Transformative Works (OTW)</b>   | <i>Oct 2018 - Present</i>   |
|                            | Volunteer, Staff   |                             |
| RECENTLY-<br>ATTENDED      | Life after the Telescope Conjecture, Berkeley, CA.   | <i>Dec 2024</i>             |
| CONFERENCES &<br>WORKSHOPS | Midwest Topology Seminar, Chicago, IL.   | <i>Nov 2024</i>             |
|                            | Workshop on Tevelev Degrees and Related Topics, Champaign, IL.   | <i>Oct 2024</i>             |
|                            | Motivic Homotopy, K-theory, and Modular Representations, Los Angeles, CA.<br><i>a celebration of the mathematics of Eric Friedlander on the occasion of his 80th birthday.</i> | <i>Aug 2024</i>             |
|                            | SLMath Summer School on Algebraic Curves, Berkeley, CA.  | <i>Jul 2024</i>             |
| SKILLS                     | Programming Languages: R, Python, Java, C++  |                             |
|                            | Other Mathematical Tools: MATLAB, Lean, Agda   |                             |
|                            | General Tools: WordPress, L <sup>A</sup> T <sub>E</sub> X  |                             |
|                            | Language: Chinese (native), English (fluent)   |                             |