# Jiantong Liu\*

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110 Altgeld Hall

Department of Mathematics

University of Illinois Urbana-Champaign

Urbana, IL 61801

Research Interest Algebraic Geometry, Algebraic Topology, Category Theory, Homotopy Theory.

EDUCATION

University of Illinois Urbana-Champaign (UIUC)

Aug 2023 - Present

Ph.D., Mathematics

University of California, Los Angeles (UCLA)

Sep 2019 - Jun 2023

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

Publication

## Preprint<sup>†</sup>

♦ Y. Bao, A. Benveniste, M. Campisi, N. Cazet, A. Goh, **J. Liu**, E. Sherman, "Bounds in Simple Hexagonal Lattice and Classification of 11-stick Knots", November 2022. https://doi.org/10.48550/arXiv.2211.00687. Submitted.

 $\operatorname{Talk}$ 

- ♦ Triangulated Category's Christmas Wish List. UIUC Graduate Algebraic Geometry and Commutative Algebra Seminar, September 2023, Champaign, Illinois.
- ♦ Bounds in Simple Hexagonal Lattice and Classification of 11-stick Knots. AMS Special Session at Joint Mathematics Meeting, January 2023, Boston, Massachusetts. [Abstract]

Research

## Undergraduate Researcher at Polymath Jr

Jun 2022 - Jan 2023

**Topic:** On combinatorial knot theory, in particular on stick knots.

Supervisors: Professor Marion Campisi, Nicholas Cazet

Undergraduate Researcher at UCLA CAM REU

Jun 2021 - Aug 2021

**Topic:** On compartmental modeling, in particular on SEIR models.

Supervisors: Professor Andrea Bertozzi, Professor Paul Brantingham, Professor David Hyde, Professor Chuntian Wang, Yotam Yaniv

Lab Research Assistant at UCLA Psychology Department Mar 2022 - Mar 2023 Topic: On object recognition and motion perception.

Supervisors: Professor Zili Liu, Yang Xing, Maggie Yeh

Teaching

#### At UIUC

⋄ Course Grader

Aug 2023 - Present

241 Calculus III

## At UCLA

♦ Course Grader

Sept 2020 - Sept 2022

115AH Honors Linear Algebra

115A Linear Algebra

<sup>\*</sup>Last updated September 9, 2023.

<sup>&</sup>lt;sup>†</sup>Authors are listed in alphabetical order. The corresponding authors' names are **in bold**.

## 105ABC Mathematics for Teaching

♦ Assistant Instructor at UCLA Math Circle Sep 2021 - Jun 2023

AWARDS Latin Honors, Magna cum laude Jun 2023

Highest Departmental Honors in Mathematics Jun 2023

Service UIUC Graduate Affairs Committee Aug 2023 - May 2024

Organization for Transformative Works (OTW) Oct 2018 - Present

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

Other Mathematical Tools: MATLAB, Lean, Agda

General Tools: WordPress, LATEX

Language: Chinese (native), English (fluent)