Jiantong Liu*

CONTACT INFORMATION	⬦ Phone: (424)440-9698 ⬦ Email: jl106@illinois.edu ⬦ Website: jiantongliu.github.io	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) *Sept 2019 - Jun 2023*
  B.S., Mathematics, Departmental Honors

  B.S., Cognitive Science, with Specialization in Computing

PUBLICATION

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

TALK

  ⬦ *Bounds in Simple Hexagonal Lattice and Classification of* 11*-stick Knots.* AMS Special Session at Joint Mathematics Meeting, Jan 2023, Boston, Massachusetts. [Abstract]

RESEARCH

Undergraduate Researcher at Polymath Jr *Jun 2022 - Jan 2023*
  Topic: On combintorial 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 - Jun 2023*
  Topic: On object recognition and motion perception.

  Supervisors: Professor Zili Liu, Mac Xing

TEACHING

At UCLA
  ⬦ Course Grader

  115AH Honors Linear Algebra *Fall 2020 - Winter 2022*

  115A Linear Algebra *Summer 2021, 2022*

  105ABC Mathematics for Teaching *Fall 2021 - Spring 2022*

  ⬦ Assistant Instructor at UCLA Math Circle *Sept 2021 - Jun 2023*

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*Last updated June 3, 2023.
[†]Corresponding Author

Reading & Seminar	**At UCLA**

At UCLA

Algebra Seminar

◇ ∞-Category Theory — *Spring 2023*
Faculty: Professor Paul Balmer
Text: Riehl & Verity, *Elements of ∞-Category Theory*
◇ Reductive Algebraic Groups — *Winter 2023*
Faculty: Professor Alexander Merkurjev
Text: Knus et al., *The Book of Involutions*

Directed Reading Program with Ben Spitz
◇ Algebraic Topology — *Fall 2022*
◇ Algebraic Number Theory — *Spring 2022*
◇ Enriched Category Theory — *Winter 2022*

Research Seminar on Category Theory — *Spring 2021*

The HOTTest Summer School — *Summer 2022*

Graduate-level Coursework

At UCLA

205A Algebraic Number Theory

210ABC Algebra

212A Homological Algebra

212B Tensor Triangulated Geometry

214AB Algebraic Geometry

215A Commutative Algebra

225A Differential Topology

225C Algebraic Topology

229A Lie Groups and Lie Algebra

Volunteering

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)