

Sixuan Lou

CONTACT INFORMATION

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EDUCATION

University of Illinois at Chicago

Ph.D. in Mathematics (August 2020-)
Advisor: İzzet Coşkun

University of Cambridge

Part III of the Mathematical Tripos (MAST), June 2020

University of Washington, Seattle

B.S. in Mathematics and Computer Science, August 2019
Thesis *Hodge Theory on Kähler Manifolds*, supervised by Lucas Braune

PAPERS AND PREPRINTS

1. Threefolds containing all curves are rationally connected,
[arxiv:2410.10656](https://arxiv.org/abs/2410.10656)

HONORS AND AWARDS

Mathematics Departmental Honor 2019

Mentoring

Directed Reading Program in Algebraic Geometry Fall 2023
Mentee: Leila Dahlia

TEACHING EXPERIENCES

University of Illinois at Chicago

College Algebra Workshop (Math 109), Teaching Assistant	Fall	2024
Summer Enrichment Mathematics Workshop, Teaching Assistant	Summer	2024
Calculus I (Math 180), Teaching Assistant	Spring	2024
Calculus III (Math 210), Teaching Assistant	Fall	2023
Abstract Algebra I (Math 516), Grader	Fall	2023
Summer Enrichment Mathematics Workshop, Teaching Assistant	Summer	2023
Calculus II (Math 181), Teaching Assistant	Spring	2023
Calculus I (Math 180), Teaching Assistant	Fall	2022
Calculus II (Math 181), Teaching Assistant	Summer	2022
Calculus I (Math 180), Teaching Assistant	Spring	2022
College Algebra (Math 110), Teaching Assistant	Fall	2021

University of Washington, Seattle

Complex Analysis (Math 427), Grader	Fall	2018
Programming Languages (CSE 341), Teaching Assistant	Spring	2017

TALKS GIVEN

UIC reading group on moduli of $K3$ surfaces:
Linear systems on $K3$ surfaces, Fall 2024

UIC RTG on syzygies:
Arithmetic regularity and Bayer-Stillman's theorem, Fall 2024

UIC RTG on moduli of sheaves:
Geometry of moduli of sheaves on general type surfaces, Spring 2023

UIC Graduate Algebraic Geometry Seminar:

Jumping lines, Spring 2023

Green's theorem, Spring 2023

Examples of rank 2 vector bundles on \mathbb{P}^3 with $c_1 = 0$, Fall 2022

Hodge theory and derived category for cubic fourfolds, Fall 2022

Global Torelli theorem for cubic threefolds via moduli of sheaves, Spring 2022

The tautological ring and the hyperelliptic locus, Spring 2022

Localization techniques in enumerative geometry, Fall 2021

Computing Gromov-Witten invariants via localization, Gromov-Witten Reading Seminar, Fall 2021

CONFERENCES AND SEMINARS ORGANIZED

UIC Graduate Algebraic Geometry Seminar, UIC, Fall 2022, Spring 2023

Midwest Algebraic Geometry Graduate Conference, UIC, August 2022

CONFERENCES ATTENDED

Midwest Algebraic Geometry Graduate Conference, UIC, August 2022

Derived Categories, Moduli Spaces, and Hyperkähler Varieties, University of Michigan, July 2022

Derived Categories and Moduli Spaces, Cornell University, April 2022

Summer School in Algebraic Geometry, Representation Theory and Number Theory, University of Chinese Academy of Sciences, Summer 2019