Amy Qing Hai Li

Personal Data	Location:	Austin, TX
	Email:	amyqli@utexas.edu
	Citizenship:	U.S.A.

Education

Graduate student, Ph.D. program in Mathematics   Aug 2020 - Present
The University of Texas at Austin
Austin, TX
Advisor: Sam Payne

B.A., *magna cum laude*   May 2020
Wellesley College
Wellesley, MA
Honors in Mathematics

Research Interests

Broadly: the moduli spaces of curves and of admissible covers. In particular, computing the cohomology and Chow rings of Hurwitz spaces, via enumerative and tropical geometry.

Preprints and Publications

1. Chow rings of Hurwitz spaces with marked ramification (with E. Clader, Z. Hu, H. Larson, and R. Lopez). arXiv:2505.04903.

2. Holomorphic forms and non-tautological cycles on moduli spaces of curves (with V. Arena, S. Canning, E. Clader, R. Haburcak, S. C. Mok, and C. Tamborini). arXiv:2402.03874. In *Selecta Mathematica* (2025).

3. Partial Configuration Spaces as Pullbacks of Diagrams of Configuration Spaces (with I. Volić). In *Advanced Technologies, Systems, and Applications V, Springer* (2020).

4. Measuring microfluidic flow rates: Monotonicity, convexity, and uncertainty (with P. Patrone, G. Cooksey, and A. Kearsley). In *Applied Mathematics Letters*, Volume 112, 2021, https://doi.org/10.1016/j.aml.2020.106694

Talks

"Intersection theory on Hurwitz spaces of admissible covers," Algebraic Geometry Seminar, The Ohio State University. September 2025.

"The boundary of Hurwitz space and vanishing H^1," (Mini-talk) Algebraic and tropical geometry of moduli spaces of curves, Universitá di Bologna. September 2025.

"Vanishing H^1 of the Hurwitz spaces of admissible covers of low degree," Special Session on Logarithmic geometry and Gromov–Witten theory, AMS Fall Western Sectional. August 2025.

"The Chow ring of Hurwitz spaces with marked ramification," Perspectives on Hurwitz Theory, Trinity College Dublin. June 2025.

"On the vanishing of H^1 of the moduli space of degree 3 admissible covers," (Mini-talk) Combinatorial Algebraic Geometry: Highlighting Underrepresented Genders, Goethe University Frankfurt am Main. April 2025.

"Double covers and non-tautological classes," (Mini-talk) Georgia Algebraic Geometry Symposium (GAGS), UG Athens. March 2025.

"Holomorphic forms and non-tautological classes," Junior Algebraic Geometry at Warwick (JAWS), University of Warwick. February 2025.

"Hurwitz Numbers: An Enumeration Problem," UT Undergraduate Math Club, UT Austin. September 2023.

"Tropical Geometry and the Moduli Space of Curves," Texas Women in Math Symposium (TWiMs), UT Austin. February 2023.

"An introduction to abelian varieties," Beginning Algebraic Geometry Seminar, UT Austin. April 2022.

Teaching Experience	*Teaching Assistant* UT Austin	Sep 2021 - Present

- Multivariable Calculus — Fall 2024
- Introduction to Mathematical Statistics — Fall 2023
- Linear Algebra — Spring 2022
- UGS 303 From Numbers to Chaos — Fall 2021, Fall 2022

Tutor/Grader — Jan 2018 - May 2020
Wellesley College

- Tutored for: Real Analysis, Abstract Algebra, Complex Analysis, Linear Algebra, Calculus I/II/III.
- Graded for: Spring 2020 Cryptography, Fall 2019 Complex Analysis.

Calculus II Supplemental Instruction Leader — Sep 2018 - Dec 2018
Wellesley College

Honors and Awards	*Provost's Graduate Excellence Fellowship* University of Texas at Austin	Aug 2020 - Present

Frank Gerth III Teaching Excellence Award — Spring 2022
University of Texas at Austin

Martha Davenport Heard Prize in Mathematics — May 2020
Wellesley College Department of Mathematics

The Waldemar J. Trjitzinsky Memorial Award — Sep 2019
American Mathematical Society

The Samuel and Hilda Levitt Fellowship — May 2019
Wellesley College

Martha Davenport Heard Sophomore Prize in Mathematics — May 2018
Wellesley College Department of Mathematics

Outreach	*Sunday Morning Math Group* UT Austin	Fall 2024 - Spring 2025

Proctored AMC exams for local middle and high-school students. Volunteered as a graduate student helper at SMMG talks.

	Directed Reading Program	Fall 2022 - Fall 2023
	UT Austin	

Mentored undergraduate students in reading projects on algebraic topology, differential topology, algebraic geometry, Galois theory, and algebraic number theory.

Texas Prison Education Initative   Fall 2023 - Spring 2024
UT Austin

Worked as an instructor for a college math course serving incarcerated women at a state prison in Lockhart, Texas.

Service	*Géométrie Algébrique en Liberté XXXIII*, Leiden, the Netherlands	July 2026

I am the US organizer for the upcoming edition of GAeL.

Géométrie Algébrique en Liberté XXXII, Toulouse, France   June 2025
US Organizer.

Beginning Algebraic Geometry Seminar, UT Austin   Fall 2022
Organizer.

Summer Minicourses, UT Austin   Summer 2021, Summer 2022
Organizer.

Graduate Representative, UT Austin   Fall 2020 - Spring 2021
Served on the student-elected Graduate Representative Committee as a liason between the math graduate students and math faculty.

Conferences and Workshops Attended	*Summer Research Institute in Algebraic Geometry*	July 2025
	Fort Collins, CO, U.S.A.	

Perspectives on Hurwitz Theory   June 2025
Dublin, Ireland.

Géométrie Algébrique en Liberté XXXII   June 2025
Dublin, Ireland.

CoAlgGeo: Highlighting Underrepresented Genders   April 2025
Frankfurt, Germany.

Georgia Algebraic Geometry Symposium   March 2025
Athens, GA, U.S.A.

Women in Algebraic Geometry II   June 2024
Princeton, NJ, U.S.A.

Géométrie Algébrique en Liberté XXXI   June 2024
Torino, Italy

Autumn School on Torus Actions and Singularities   September 2023
Oldenburg, Germany

BIRS Workshop: Curves Algebraic, Tropical, and Logarithmic   August 2023
Banff, Canada

AGNES Summer School on Intersection Theory   July 2023

Providence, RI, U.S.A.

Texas Women in Mathematics Symposium   March 2023
Austin, TX, U.S.A.

MSRI Summer School in Tropical Geometry   August 2022
Moraga, CA, U.S.A.

International School in Tropical Geometry   May 2022
Valladolid, Spain

Professional   Sigma Xi, Wellesley College Chapter; American Mathematical Society.
Membership