

Shiyue Li

Department of Mathematics, Brown University
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Research Interests	Combinatorial algebraic geometry: tropical geometry, moduli spaces of curves, geometric models and invariants of matroids.	
Education	Brown University Ph.D. in Mathematics. Advisor: Melody Chan.	2019-present
	Yale University M.Sc. in Mathematics, Lang Fellow, Ph.D. Candidate.	2017-2019
	Harvey Mudd College B.Sc. in Mathematics, with Distinction and Honors. HSA Concentration in Music.	2013-2017
Research	<ol style="list-style-type: none">7. <i>Topological zeta functions of matroids</i> with Max Kutler, Dawit Mengesha, Robert Miranda, Brian Sun, in preparation.6. <i>Intersecting ψ-classes on $M_{0,w}^{\text{trop}}$</i> with Marvin Anas Hahn, arXiv e-preprint 2108.00875.5. <i>Polyhedral complexes and rational curves with cyclic action</i> with Emily Clader, Chiara Damiolini, Daoji Huang, Rohini Ramadas, arXiv e-preprint 2104.06526.4. <i>Relative Bott-Samelson varieties</i> arXiv e-preprint 2011.04814.3. <i>Topology of tropical moduli spaces of weighted stable curves in higher genus</i> with Siddarth Kannan, Stefano Serpente, Claudia Yun. arXiv e-preprint 2010.11767.2. <i>Chow ring of heavy/light Hassett spaces via tropical geometry</i> with Siddarth Kannan, Dagan Karp. Journal of Combinatorial Theory, Series A. 178C (2021) 105348.1. <i>Tropical derivation of cohomology rings of heavy/light Hassett spaces</i> undergraduate thesis under supervision of Dagan Karp, Dhruv Ranganathan	
Awards & Honors	Robert Willets Carle Scholarship at Yale	2018-2019
	Kenneth and Mary Wang Fellowship at Yale	2017-2018
	Lang Fellowship at Yale Mathematics	2017-2022
	Harvey S. Mudd Merit Award	2013-2017
	Yu Yuen Kit So International Scholarship at Harvey Mudd	2013-2017
	Dean's List (all semesters) at Harvey Mudd	2013-2017
	China National Linguistics Olympiad 3rd Place	2013
	China National Linguistics Olympiad Team 2nd Place	2013

Invited Talks	Joint Mathematics Meetings AWM-AMS special session	Jan 2022
	SIAM conference on Applied Algebraic Geometry	Aug 2021
	Moduli Across the Pandemic	Apr 2021
	Tropical Geometry in Frankfurt (TGiF)-Seminar	Apr 2021
	AMS Spring Eastern Sectional Meeting on Moduli of Curves	Mar 2021
	Brown University Algebra Seminar	Nov 2020
	American Graduate Student Algebraic Geometry Seminar	Oct 2020
	AMS Spring Eastern Sectional Meeting on Moduli of Curves (cancelled)	Mar 2020
Outreach Talks	Summer Undergraduate Mathematics Research at Yale Colloquium	Jul 2020
	Johns Hopkins Center for Talented Youth Colloquium	Mar 2020
	Yale Undergraduate Mathematics Society Colloquium	Nov 2019
	Department Undergraduate Group Colloquium at Brown University	Oct 2019
Professional Positions	Google Research , Intern Mentors: Caroline Pantofaru, Malcolm Slaney. Research on Machine Learning algorithms to solve a human saliency event detection problem using machine hearing and computer vision.	Summer 2016
	Howard Hughes Medical Institute , Research Assistant Mentor: Blerita Shtylla Mathematical modeling on DNA Segregation. Implemented Gillespie algorithms and Next Sub-volume Method to simulate diffusion and reactions of ParA and ParB proteins.	Summer 2014
Teaching	Brown University , Providence, RI Math 100 Introductory Calculus, Part II, TA Math 100 Introductory Calculus, Part II, TA	Spring 2021 Fall 2020
	Canada/USA Mathcamp 2019 , Portland, OR Introduction to Group Theory Young tableaux and Representation Theory Young tableaux and Combinatorics Young tableaux and Probability	Summer 2019
	Canada/USA Mathcamp 2018 , Golden, CO Algebraic Number Theory Geometric Group Theory Modular Forms Tropical Plane Curves Rational Points on Elliptic Curves	Summer 2018
	Yale University , New Haven, CT Math 225 Linear Algebra and Matrix Theory, TA Math 112 Calculus, TA	Fall 2018 Spring 2018
	Mentoring Summer Undergraduate Math Research at Yale 1. Topological zeta functions of matroids Co-mentor: Max Kutler. Mentees: Dawit Mengesha, Robert Miranda, Brian Sun.	Summer 2020

	Canada/USA Mathcamp Projects	
	1. Research project. Mentee: Ilaria Seigal.	Summer 2019
	2. Schubert calculus. Mentees: Alice Jenkins, Jeremy Zhou.	Summer 2019
	3. Primes of the form $x^2 + ny^2$. Mentee: Reed Jacobs.	Summer 2018
	4. Enumerative geometry. Mentees: Simran Khunger, Rupert Li.	Summer 2018
	5. Group actions and Sylow's theorems. Mentees: Serena An.	Summer 2018
	Brown Mathematics Directed Reading Program.	
	1. Ideals, Varieties and Algorithms. Mentees: Deven Carmichael, Joseph Hlavinka.	Fall 2020
	2. Foundations of Algebraic Geometry. Mentees: Dominick Joo, Elliott Lehrer, Joshua Lebo.	Spring 2020
	Women in Sciences at Yale.	
	1. Mentee: Alara Değirmenci.	Fall 2018
Service	<i>AMS Chapter at Brown</i> , Co-chair	2019-2021
	<i>Brown Math Diversity and Inclusiveness Committee</i> , Member	2019-2020
	<i>Brown University ACCRIP</i> , Graduate Representative	2019-2020
	<i>AMS Graduate Conferences</i> , Organizer	2020
	<i>Brown Math Directed Reading Program</i> , Organizer	2019-2020
	<i>Intersections: Women and Gender Minority Groups in Mathematics at Yale</i> , Co-organizer	2018
	<i>Yale Math Directed Reading Program</i> , Organizer	2018
	<i>Yale Graduate and Professional Student</i> , Senator	2018
	<i>Harvey Mudd College Math Club</i> , President	2016
	<i>Caltech Harvey Mudd Math Competition</i> , Organizer	2016
Languages	Mandarin Chinese, English, French, C++, Python	
Hobbies	Music, mountaineering.	
References	References are available on request.	