## SHIYUE LI

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♀ 151 Thayer Street, Providence RI, 02912

My current research interest is to study enumerative and intersection problems in algebraic geometry and arithmetic geometry, using techniques from combinatorics and representation theory.

# **EDUCATION**

2019-	Brown University, PhD in progress, advised by Melody Chan
117-2019	Vale University MSc in Mathematics

2013-2017 Harvey Mudd College, B.S. in Mathematics with Honors and Distinction



## In preparation | Chow Ring of Heavy/Light Hassett Spaces via Tropical Geometry, 2019,

> Joint work with Siddarth Kannan and Dagan Karp

### Senior thesis | Tropical Derivation of Cohomology Ring of Heavy/Light Hassett Spaces, 2017,

> Advisor: Dagan Karp, Reader: Dhruv Ranganathan.

# AWARDS

Robert Willets Carle Scholarship, Yale University
Kenneth and Mary Wang Graduate Fellowship, Yale University
Lang Fellowship, Yale University Department of Mathematics
Harvey S. Mudd Merit Award, Harvey Mudd College, awarded to students who demonstrate superior aca-
demic achievement and ability to contribute to the College community
Yu Yuen Kit So International Scholarship, Harvey Mudd College, awarded to one international recipient for
each entering class based on superior academic performance as shown in the application for admission
China National Linguistics Olympiad, Individual 3rd Place
China National Linguistics Olympiad, Team 2nd Place

# TALKS

Feb 2019	Moduli Space of Linear Series with imposed Ramification, Yale University
Feb 2019	Moduli Space of Linear Series with Imposed Ramification, Brown University
October 2018	Schubert Calculus and Young Tableaux, Yale University
November 2018	Meet the Matroids, Yale University
May 2017	Tropical Derivation of Cohomology Ring of Heavy/Light Hassett Spaces, Harvey Mudd College

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# **TEACHING**

## Summer 2019 | Canada/USA Mathcamp, MENTOR, Summer 2018 | > In 2019, taught Introduction to

- > In 2019, taught Introduction to Group Theory, Young tableaux and Representation Theory, Young tableaux and Combinatorics, Young tabelaux and Probability to talented high school students.
- > In 2018, taught Algebraic Number Theory, Geometric Group Theory, Modular Forms, Tropical Plane Curves and Rational Points on Elliptic Curves to talented high school students.

#### 2017-2019 | Yale University, TEACHING ASSISTANT,

- > Math 225 Linear Algebra and Matrix Theory, Fall 2018
- > Math 112 Calculus, Spring 2018

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#### 2014-2017

#### Harvey Mudd College, TEACHING ASSISTANT,

- > Math 147 Topology, Spring 2017
- > Math 132 Anaysis 2, Fall 2016
- > Math 171 Abstract Algebra, Fall 2016
- > Physics 51 Electricity Theory and Optics, Fall 2015
- > Physics 23 Special Relativity, Fall 2015
- > Physics 24 Mechanics, Spring 2015
- > Math 30 Calculus, Fall 2014,
- > Math 35 Statistics and Probability, Fall 2014



### MENTORING

## Summer 2019

#### Canada/USA Mathcamp Reading Projects, MENTOR,

Summer 2018

- > Enumerative Geometry. Mentees: Alice Jenkins, Jeremy Zhou.
- > Primes of the Form  $x^2 + ny^2$ . Adivisee : Reed Jacobs.
- > Schubert Calculus. Mentees: Simran Khunger, Rupert Li.

#### 2018

#### Women in Science at Yale, GRADUATE MENTOR,

> Undergraduate mentee : Alara Değirmenci

#### Fall 2018

#### Brown Math Directed Reading Project, GRADUATE MENTOR,

> Foundations of Algebraic Geometry. Mentees: Dominick Joo, Elliott Lehrer, Joshua Lebo.



## CTHER PROFESSIONAL EXPERIENCE

#### Summer 2016 Intern

## Google Research and Machine Intelligence, MOUNTAIN VIEW, CALIFORNIA,

- > Advisors: Caroline Pantofaru, Malcolm Slaney.
- > Research on Machine Learning algorithms using TensorFlow to solve an audio/video syncing problem involving computer vision and human saliency event detection.

### Summer 2014 Researcher

#### Howard Hughes Medical Institute Undergraduate Research, CLAREMONT, CALIFORNIA,

> Mathematical Modeling on DNA Segregation. Implemented Gillespie algorithms and Next Sub-volume Method to simulate diffusion and reactions of ParA and ParB proteins

#### Summer 2012

### Summer Science Program, Socorro, New Mexico,

- > Research on orbit determination of solar-system body. Implemented programs in Python using iterative Gaussian method to determine the orbit elements based on the observation data of Asteroid 1998QS52 in Etscorn Observatory over six weeks
- > Paper and results archived in Harvard-Smithsonian Center for Astrophysics.



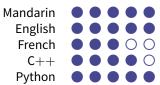
## SERVICE

2019-2020	American Mathematical Society Graduate Conferences, Coorganizer
2019	Brown Math Directed Reading Program, Coorganizer
2018	Intersections: Women and Gender Minority Groups in Mathematics at Yale, Coorganizer
2018	Yale Math Directed Reading Program, Organizer
2018-2019	Yale Graduate and Professional Student Senate, Senator
2016-2017	Harvey Mudd College Math Club, President
2015-2016	Caltech Harvey Mudd Math Competition, Organizer

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## </> LANGUAGES



## **V** Fun Stuff

PIANO studied with Gayle Blankenberg (Los Angeles), Carol Morgan (Vienna), Fantee Jones (Yale), Maxwell Foster (Yale)

CLASSICAL GUITAR studied with Jack Sanders (Los Angeles); member of Pomona College Guitar Quartet

Go amateur 3 Dan at age of 10

SPORTS running, rock climbing, cycling