

Benjamin (Ben) Zhou

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EDUCATION

Department of Mathematics, Northwestern University *9/2018 - Present*
Ph.D. candidate in Mathematics
Advisor: Eric Zaslow

Department of Computer Science, Stanford University *2015-2017*
M.S. in Computer Science
Dual Concentration in Artificial Intelligence, Theoretical Computer Science

Department of Mathematics, Stanford University *2012-2016*
B.S. with Honors in Mathematics
Advisor: András Vasy
Undergraduate thesis: *Spacetime Geometries*

RESEARCH INTERESTS

My research interests are in Gromov-Witten theory, Mirror Symmetry, Algebraic Geometry, Mathematical Physics, Symplectic Geometry.

PUBLICATIONS

- *Higher genus local Gromov-Witten invariants from degeneration of projective bundle*, in progress.
- *Quantum Theta Functions from Open Mirror Symmetry*, joint with Tim Gräfnitz, Helge Ruddat, and Eric Zaslow, in progress.

HONORS AND AWARDS

Northwestern University Graduate Fellowship *2022-2023*
"Excellence as Graduate Teaching Assistant" Departmental Award *2021-2022*
NSF RTG: "Analysis on Manifolds" recipient, National Science Foundation *2019*
Semifinalist, Siemens Competition in Math, Science, and Technology *2012*
National Finalist, Siemens Competition in Math, Science, and Technology *2011*

TEACHING

TA for Math 351: Fourier Analysis and Boundary Value Problems, Northwestern University *Fall 2023*
TA for Math 240: Linear Algebra, Northwestern University *Fall 2023*
TA for Math 368: Introduction to Optimization, Northwestern University *Spring 2022*
TA for Math 340: Geometry, Northwestern University *Spring 2022*
TA for Math 366-1: Mathematical Models in Finance, Northwestern University *Winter 2022*
TA for Math 336-1: Introduction to the Theory of Numbers, Northwestern University *Winter 2022*
TA for Math 342: Introduction to Differential Geometry, Northwestern University *Fall 2021*
TA for Math 320-1: Real Analysis, Northwestern University *Fall 2021*
TA for Math 300: Foundations of Higher Mathematics, Northwestern University *Spring 2021*
TA for Math 230-2: Multivariable Integral Calculus, Northwestern University *Winter 2021*
TA for Math 230-1: Multivariable Differential Calculus, Northwestern University *Fall 2020*
TA for Math 230-1: Multivariable Differential Calculus, Northwestern University *Fall 2019*
TA for CS 229: Machine Learning, Stanford University *Fall 2016*

TALKS

Algebraic Geometry Seminar, University of Georgia <i>Higher genus open/closed Gromov-Witten correspondences for log Calabi-Yau surfaces</i>	11/1/2023
Geometry/Physics Seminar, Northwestern University <i>Higher genus open/closed Gromov-Witten correspondences for log Calabi-Yau surfaces</i>	10/26/2023
Graduate Student Seminar, Northwestern University <i>Curve Counting and Modular Forms</i>	6/2023
Graduate Student Seminar, Northwestern University <i>Every smooth cubic surface has exactly 27 lines</i>	5/2021

CONFERENCES ATTENDED

Topological Moonshine at UIUC	7/17-7/21/23
Los Angeles Workshop on Representations and Geometry at USC	6/12-6/16/23
Richmond Geometry Meeting at VCU	6/2-6/4/23
IHÉS Summer School in Enumerative Geometry, Physics, Representation Theory	7/2021

SERVICE AND OUTREACH

Tutoring of probability, linear algebra, real analysis to Northwestern undergraduates	2020-2023
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PREVIOUS WORK EXPERIENCE

Research Assistant, Stanford Undergraduate Research in Computer Science	2016
Research Assistant, Stanford Undergraduate Research in Mathematics	2015
Software Engineering Intern, xAd Inc.	2015

MISCELLANEOUS

Programming languages: Python, C++, Java, Sage
Languages: English (native), Chinese (working proficiency)