Mengxue Yang

Kavli IPMU, University of Tokyo
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Citizenship: China
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Employment

Kavli IPMU, University of Tokyo, Japan — 2023 – expected 2026
Project Researcher in Mathematics

Heidelberg University, Germany — 2022 – 2023
Postdoc in Research Station Geometry & Dynamics
Mentor: Anna Wienhard

Education

University of Illinois at Chicago, USA — 2017 – 2022
Ph.D. in Mathematics
Thesis: Generalized opers
Advisor: Laura Schaposnik

University of Waterloo, Canada — 2012 – 2017
B.M. Honours Pure Mathematics and Honours Computer Science, Co-op Program
Degree Honours: With Distinction

Papers and Preprints

(BAA)-branes from higher Teichmüller theory, with Eric Y. Chen and Enya Hsiao. arXiv:2508.09562

Conformal limits in Cayley components and Θ-positive opers, with Georgios Kydonakis. arXiv:2408.06198

A comparison of generalized opers and (G, P)-opers, *Indian J Pure Appl Math (2021).* doi:10.1007/s13226-021-00170-0

On the generalized SO$(2n, \mathbb{C})$-opers, with Indranil Biswas and Laura Schaposnik, *Ann Glob Anal Geom (2021).* doi:10.1007/s10455-021-09783-4

Generalized B-opers, with Indranil Biswas and Laura Schaposnik, *SIGMA 16 (2020).* doi:10.3842/SIGMA.2020.041

Teaching Experience

Instructor, UIC
MATH 104 Mathematical Reasoning Workshop	Fall 2021
Young Scholar Program at UIC	Summer 2021
MATH 077 Mathematical Reasoning Workshop	Spring 2021
Summer Enrichment Workshop for College Algebra	Summer 2020
MATH 179 Emerging Scholars Workshop for Calculus I	Fall 2019

Teaching Assistant, UIC
Calculus I-III, Linear Algebra for Business, Mathematical Reasoning	2017-2021

Grader, UIC
MATH 414 Real Analysis II	Spring 2021

Talks and Seminar Presentations

10. *A stacky Cayley correspondence*, Workshop on Character Varieties and Higgs Bundles, University of Costa Rica Guanacaste, August 2025

9. *Conformal limit on Cayley components*, Geometric Representation Theory Seminar, YMSC Tsinghua University, April 2025

8. *Conformal limit on Cayley components*, Seoul-Tokyo Conference in Mathematics, KIAS, November 2024

7. *Conformal limit on Cayley components*, Mini-workshop on Higgs bundles, Osaka University, May 2024

6. *Conformal limit on Cayley components*, International Workshop on Higher Teichmüller Theory, CIM Nankai University, May 2024

5. *The $\hbar$-conformal limit and generalized opers*, GTM seminar, Kavli IPMU, Nov 2023

4. *The $\hbar$-conformal limit and generalized opers*, Workshop on Topics in the geometry and topology of moduli spaces 2, Waseda University, Nov 2023

3. *A conformal limit on the Hitchin component*, Algebraic Geometry Seminar, University of Oxford, Nov 2022

2. *An introduction to opers*, CP7 Seminar, Heidelberg University, Jul 2022

1. *Complex projective structures*, Graduate Geometry/Topology Seminar, UIC, Oct 2021

Conference and Workshop Organization

Unifying geometric perspectives on the Hitchin moduli space, Bernoulli Center, expected 2026
with Eric Y. Chen

Complex Lagrangians, Integrable Systems, and Quantization, University of Oxford, June 5-9, 2023
with Christopher Mahadeo and Laura Schaposnik

Other Activities

Referee for Épijournal de Géométrie Algébrique

AWM UIC Student Chapter Co-organizer, UIC   2017 − 2019

Sonia Kovalevsky Day Volunteer, UIC   2017 − 2019

DG Student Seminar Co-organizer, Waterloo   2017

Pure Math Club Co-organizer, Waterloo   2017

Awards and Honours

MSCS Teaching Assistant Award, UIC   2021

Oberwolfach Leibniz Graduate Student, MFO   2019

Bodmer International Travel Award, UIC   2019

Funding Award for Women In Math Summer School, UBC   2016

President's Scholarship of Distinction, Waterloo   2012

Other Employment

Software Engineer Intern, Amazon Lab 126   Summer 2015

Software Engineer Intern, Evertz Microsystems   Summer 2014

Junior Developer Intern, PureFacts Financial Solutions   Summer 2013

Relevant Skills

Languages: English, Mandarin, Japanese (intermediate), German and Spanish (elementary)

Programming: C/C++, Java, PARI/GP, Sage, Scala, etc.

Last updated: September 25, 2025