

# Mengxue Yang

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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 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](https://arxiv.org/abs/2508.09562)

**Conformal limits in Cayley components and  $\Theta$ -positive opers**, with Georgios Kydonakis. [arXiv:2408.06198](https://arxiv.org/abs/2408.06198)

**A comparison of generalized opers and  $(G, P)$ -opers**, *Indian J Pure Appl Math* (2021). [doi:-10.1007/s13226-021-00170-0](https://doi.org/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](https://doi.org/10.1007/s10455-021-09783-4)

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

<b>Software Engineer Intern</b> , Amazon Lab 126	Summer 2015
<b>Software Engineer Intern</b> , Evertz Microsystems	Summer 2014
<b>Junior Developer Intern</b> , 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 26, 2025