

Mengxue Yang

Kavli IPMU, University of Tokyo
5-1-5 Kashiwanoha
Kashiwa, Chiba, 277-8583, Japan

Citizenship: China
Email: mengxue.yang@ipmu.jp

EMPLOYMENT

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

Heidelberg University, Germany 2022 – 2023
Postdoctoral Researcher 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 Θ -positive opers, with Georgios Kydonakis. *Adv Math* (2026). [doi:10.1016/j.aim.2026.110969](https://doi.org/10.1016/j.aim.2026.110969)

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 $\mathrm{SO}(2n, \mathbb{C})$ -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

11. *A stacky Cayley correspondence*, New developments in KH correspondence and Higgs bundles 2, Osaka Metropolitan University, June 2026
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, August 10-14, 2026
with Eric Y. Chen

The Geometry and Physics of Higgs Bundles

Kavli IPMU, June 22-24, 2026
with Hisashi Kasuya, Hiraku Nakajima, Laura Schaposnik, Lutian Zhao

Complex Lagrangians, Integrable Systems, and Quantization

University of Oxford, June 5-9, 2023
with Christopher Mahadeo and Laura Schaposnik

OTHER ACTIVITIES

Referee for <i>Épjournal de Géométrie Algébrique</i>	2024
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

LANGUAGES

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

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

Last updated: June 19, 2026