Mengxue Yang

Kavli IPMU
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Citizenship: China
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Employment

Kavli IPMU, Japan   2023 – expected 2026
Postdoc

Universität Heidelberg, 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

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

Conference and Workshop Organization

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

Talks and Seminar Presentations

15. *The ℏ-conformal limit and generalized opers*, GTM seminar, Kavli IPMU, Nov 2023

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

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

12. *An introduction to opers*, CP7 Seminar, Universität Heidelberg, Jul 2022

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

10. *Intro to Teichmüller theory II: annuli*, Graduate Geometry, Topology and Dynamics Seminar, UIC, Feb 2020

9. *Stable Higgs bundles*, Graduate Geometry, Topology and Dynamics Seminar, UIC, Nov 2019

8. *Combinatorics of Coxeter systems*, Graduate Geometry, Topology and Dynamics Seminar, UIC, Sept 2019

7. *Morse inequalities*, Graduate Geometry, Topology and Dynamics Seminar, UIC, Feb 2019

6. *The Curvature of Higher Dimensional Manifolds, Part I*, Differential Geometry Student Seminar, Waterloo, Oct 2016

5. *Curves*, Differential Geometry Student Seminar, Waterloo, Sept 2016

4. *Subknots in Ideal Knots, Random Knots, and Knotted Proteins*, Women in Math Summer School, UBC, Aug 2016

3. *The Second Fundamental Form*, Geometry Working Seminar, Waterloo, Aug 2016

2. *Things I Learned About Gauss–Bonnet*, Canadian Mathematics Undergraduate Conference, University of Victoria, Jul 2016

1. *The Intrinsic Geometry of Surfaces*, Geometry Working Seminar, Waterloo, Jun 2016

0. *The Picture Hanging Problem*, Canadian Mathematics Undergraduate Conference, University of Alberta, Jun 2015

Honours and Awards

7. MSCS Teaching Assistant Award, UIC — 2021
6. Oberwolfach Leibniz Graduate Student, MFO — 2019
5. Bodmer International Travel Award, UIC — 2019
4. Teaching Assistantship, UIC — 2017–2021
3. Funding Award for Women In Math Summer School, UBC — 2016
2. Undergraduate Student Research Award (x2), Waterloo — 2016
1. President's Scholarship of Distinction, Waterloo — 2012

Other Activities

10. **AWM UIC Student Chapter Co-organizer**, UIC — 2017 − 2019
9. **Sonia Kovalevsky Day Volunteer**, UIC — 2017 − 2019
8. **DG Student Seminar Co-organizer**, Waterloo — 2017
7. **Pure Math Club Co-organizer**, Waterloo — 2017
6. **Volunteer Tutor**, Tutoring Beyond Borders — 2017
5. **Women in CS Club Co-organizer**, Waterloo — 2015
4. **Orientation Black Tie Leader**, Waterloo, — 2014
3. **MathSoc Website Board**, Waterloo — 2013
2. **Volunteer Translator**, Global Voices — 2011 − 2013
1. **Volunteer Tutor**, JUMP Math at Branksome Hall — 2010 − 2011

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

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

Last updated: March 4, 2024