

# HEATHER LEE

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<https://heather-math.github.io/>

## Education

- 2015 Ph.D. in Mathematics, University of California, Berkeley, CA.  
Advisor: Denis Auroux
- 2009 B.S. in Mathematics, University of Washington, Seattle, WA.
- 2005 Eastmont High School, East Wenatchee, WA.

## Appointments

- 2017-2021 Postdoctoral Scholar, University of Washington, Seattle, WA.
- Fall 2020 Junior Fellow, Institut Mittag-Leffler, Sweden (remote).
- 2016-2017 Member, Institute for Advanced Study, Princeton, NJ.
- 2015-2016 Golomb Visiting Assistant Professor, Purdue University, West Lafayette, IN.

## Fellowships and grants

- AWM-NSF travel grant, 2020
- UC Berkeley Chancellor's fellowship, 2009-2011
- UW physics department Boas scholarship, 2008
- UW math department Phelps fellowship, 2006
- UW Martin Honors scholarship, 2005-2009
- Washington NASA Space Grant scholarship, 2005-2007

## Publications

5. Haniya Azam, Catherine Cannizzo, Heather Lee, Chiu-Chu Melissa Liu, *Homological mirror symmetry for theta divisors*, in preparation, expect to complete in Fall 2021.
4. Haniya Azam, Catherine Cannizzo, Heather Lee, Chiu-Chu Melissa Liu, *Global homological mirror symmetry for genus two curves*, in preparation, expect to complete in Fall 2021.
3. Jayadev Athreya, Yu-Wei Fan, Heather Lee, *Counting special Lagrangian classes and semistable Mukai vectors for K3 surfaces*, arXiv:2109.13824.
2. Haniya Azam, Catherine Cannizzo, Heather Lee, *Action-angle and complex coordinates on toric manifolds*, to appear in Research Directions in Symplectic and Contact Geometry and Topology, Springer, 2021, arXiv:2103.08714.
1. Heather Lee, *Homological mirror symmetry for open Riemann surfaces from pair-of-pants decompositions*, arXiv:1608.04473.

## Invited talks

- 2022 Jan. *JMM, Quantum Categorical Structures in Mirror Symmetry Session*, Seattle.
- 2021 Nov. *Rainwater Seminar*, University of Washington.
- Nov. *Enumerative Geometry Seminar*, Columbia University, NY.
- Nov. *Math Department Colloquium*, University of Washington.
- Sept. *Australian Geometry and Topology Webinar*.
- Apr. *Western Hemisphere Virtual Symplectic Geometry Seminar*.
- Mar. *AMS Eastern Sectional Meeting*.

## Invited talks (continued)

- 2020 Sep. *Junior Global Poisson Workshop.*
- Apr. *Algebraic Geometry Seminar*, University of Washington.
- Jan. *JMM, AMS-AWM Symplectic and Contact Geometry Session*, Denver.
- 2019 Oct. *Enumerative Geometry Seminar*, Columbia University, NY.
- Nov. *Geometry and Topology Seminar*, University of Oregon, Eugene.
- Aug. *Conference on Symplectic Topology*, IMPA, Rio de Janeiro, Brazil.
- Apr. *Pacific Northwest Geometry Seminar*, University of Washington, Seattle.
- 2018 May *Current Topics Seminar*, University of Washington, Seattle.
- Feb. *Math Department Colloquium*, Jacobs University, Bremen, Germany.
- 2017 Aug. *Holom. Curves and Sympl. Topology Conference*, Institut Mittag-Leffler, Sweden.
- Apr. *Geometric Structures Lab seminar*, Fields Institute, Toronto, Canada.
- Jan. *Simons Collaboration on HMS Postdoc Workshop*, Univ. of Miami, Coral Gables.
- 2016 Dec. *Topology and Symplectic Geometry Seminar*, Stony Brook University.
- Nov. *Geometry/Physics Seminar*, Northwestern University.
- Nov. *Algebraic Geometry Seminar*, John Hopkins University.
- Sep. *Symplectic Geometry, Gauge Theory, and Categorification Seminar*, Columbia Univ.
- May *Simons Workshop on SYZ Mirror Symmetry and Related Topics*, Harvard.
- Apr. *Symplectic Geometry Seminar*, University of Illinois at Urbana-Champaign.
- 2015 Dec. *Geometry and Physics Seminar*, Boston University.
- Nov. *Topology Seminar*, Purdue University.
- Apr. *Northern California Symplectic Geometry Seminar*, Stanford University.
- 2014 Nov. *AMS Southeastern Sectional Meeting, Mirror Symmetry Session*, Greensboro, NC.
- 2012 Oct. *Graduate Workshop on Symplectic and Contact Topology*, SCGP, Stony Brook.

## Teaching experiences

### *Undergraduate courses:*

- 2021 Linear Analysis (Math 309), UW (3 classes, 50 students each).
- Fall 2020 Teaching assistant for Calculus I (Math 124), UW.
- 2019-20 Intro. to Diff. Eqn (Math 307), UW (4 classes, 120 students each).
- \*In Spr. 2020, made video lectures which were used by the math department for many sections of Math 307 during Spr. 2020 - Spr. 2021 (~1200 students).
- 2018-19 Linear Analysis (Math 309), UW (4 classes, 50 students each).
- 2017-18 Intro. to Diff. Eqn (Math 307), UW (4 classes, 50 students each).
- 2015-16 ODE (Math 266), Purdue (4 classes, 35 students each).
- Spr. 2015 Discussion sections in Lin. Alg. and Diff. Eqn. (Math 54), UC Berkeley.
- Spr. 2014 Discussion sections in Lin. Alg. and Diff. Eqn. (Math 54), UC Berkeley.
- Spr. 2013 Discussion sections in Multivariable Calculus (Math 53), UC Berkeley.
- Fall 2011 Discussion sections in Calculus II (Math 1B), UC Berkeley.

### *Graduate course:*

- Spring 2019 Weekly minicourse on Classical Mechanics and Symplectic Geometry, UW.

### *Supervised reading:*

- Fall 2014 Morse theory, Berkeley Math DRP for undergraduates.

## Undergraduate research supervision

Fall 2021 *Counting stable spheres in K3 surfaces*  
 Heath Liu (UW), Logan Reina (UW), Bradley Taylor (UW),  
 Charlie Spivak (Oakland Tech high school)

## Professional activities

### *Conference and seminar organization:*

Sep. 2020 Co-organizer for Workshop on Floer-theoretic and Algebro-geometric  
 Aspects of SYZ Mirror Symmetry, online.

Spring 2017 Organizer of Seminar on Mirror Symmetry by Examples, IAS.

### *Service:*

Apr. 2021 workgroup member, UW sustainability action workgroup on buildings and energy.  
 2019-2021 committee member, colloquium committee, UW Math Department.

### *Journal article referee:*

Forum of Mathematics, Sigma  
 Journal of Differential Geometry  
 Selecta Mathematica

### *Outreach:*

- (3) Career panelist at the Women in Symplectic and Contact Geometry and Topology workshop, ICERM, Providence, RI, July 2019
- (2) Co-taught one lesson through Bay Area Scientist in Schools where the student body is predominately minority or economically disadvantaged, Oakland, CA, Sep. 2014
- (1) Ran hands-on exhibits at the Bay Area Science Festival, San Francisco, CA, Nov. 2013