

Luya Wang

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Employment

Institute for Advanced Study and Princeton University, September, 2024 - July, 2027

NSF Postdoctoral Fellow and Member

Postdoctoral Mentor: Helmut Hofer

Stanford University, September, 2023 - August, 2024

NSF Postdoctoral Fellow

Postdoctoral Mentor: Ciprian Manolescu

Education

Ph.D. in Mathematics, University of California, Berkeley, 2018 - 2023

NSF Graduate Research Fellow

Advisor: Michael Hutchings

B.A. in Mathematics, Princeton University, 2014 - 2018

Senior Thesis Advisor: John Pardon

Research papers

8. *Spin(7)-instantons on Joyce's first examples of compact Spin(7)-manifolds* (with Mateo Galdeano, Daniel Platt and Yuuji Tanaka), arXiv 2310.03451 (2023).
7. *On Donaldson's 4-6 question* (with Amanda Hirschi), arXiv 2309.07041 (2023).
6. *Infinitely many monotone Lagrangian tori in higher projective spaces* (with Soham Chanda and Amanda Hirschi), arXiv 2307.06934 (2023).
5. *A connected sum formula for embedded contact homology*, arXiv 2305.01646 (2023).
4. *Legendrian embedded contact homology* (with Julian Chaidez, Oliver Edtmair, Yuan Yao and Ziwen Zhao), arXiv 2302.07259 (2023).
3. *Fixed point-free pseudo-Anosovs and the cinquefoil* (with Ethan Farber and Braeden Reinoso), arXiv 2203.01402 (2022). To appear in *Geometry & Topology*.
2. *A combinatorial proof of invariance of double-point enhanced grid homology* (with Timothy Ratigan and Joshua Wang), arxiv 1810.03202 (2018).
1. *Hyperbolicity of links in thickened surfaces* (with Colin Adams, Carlos Albers-Riera, Beatrix Haddock, Zhiqi Li, Daishiro Nishida and Braeden Reinoso), arXiv 1802.05770. *Topol. Appl.* vol. 256 (2019).

Invited talks

Rutgers Symplectic Summer School, August, 2024.

UMI/AMS Special Session: the Interface Between Smooth and Symplectic 4-manifolds, July, 2024.

Combinatorial and gauge theoretical methods in low dimensional-topology and geometry, June, 2024.

Oregon Topology Seminar, May 14, 2024.

Australian Geometric Topology Webinar, April 17, 2024.

Arkansas Topology Seminar (Zoom), April 4, 2024.

USC Topology Seminar, March 18, 2024.
Claremont Topology Seminar, February 13, 2024.
Texas State Topology Seminar, February 9, 2024.
Stanford Symplectic Geometry Seminar, January 8, 2024.
Joint IAS/Princeton/Montreal/Paris/Tel-Aviv Symplectic Geometry Zoominar, December 8, 2023.
Gauge Theory Virtual, October 30, 2023.
Yale Geometry & Topology Seminar, October 17, 2023.
Minnesota Differential Geometry and Symplectic Topology Seminar (Zoom), October 12, 2023.
Princeton RTG summer school mini conference, July 21, 2023.
Caltech Geometry & Topology Seminar, May 5, 2023.
UC Davis Topology Seminar, April 27, 2023.
BIRS Interactions between Symplectic and Holomorphic Convexity in 4 Dimensions, April 14, 2023.
Spring Southeastern AMS special session on Contact and Symplectic Topology in dimensions 3 and 4, March 18, 2023.
MIT Symplectic Seminar, March 16, 2023.
Princeton University/IAS Joint Symplectic Geometry Seminar, November 21, 2022.
Rice Geometry Seminar, November 9, 2022.
University of Chicago Dynamics Seminar, October 24, 2022.
Fall Western AMS Special Session on 4-Dimensional Topology, October 22, 2022.
MSRI Floer Homotopy Seminar, October 13, 2022.
Western Hemisphere Virtual Symplectic Seminar, October 7, 2022.
Low-Dimensional Topology and Homeomorphism Groups, University of Maryland, September 6, 2022.
UC Berkeley Topology Seminar. April 13, 2022.
Stanford Topology Seminar. April 12, 2022.
AMS-AWM Special Session: Women and Gender Minorities in Symplectic and Contact Geometry at Joint Mathematics Meetings. April 8, 2022.
Georgia Tech Geometry-Topology Seminar. April 4, 2022.

Organizational activities and service

Refereeing: *Advances in Mathematics*, *Mathematische Zeitschrift*.
 Co-organizer of Stanford Topology Seminar. 2023-2024.
 Co-organizer of AMS-AWM Special Session for Women and Gender Minorities in Symplectic and Contact Geometry and Topology. San Francisco, January, 2024.
 Co-organizer of the KYLEREC workshops (both in person and virtually). 2021-2023.
 Co-organizer of the Geometric Topology Grad and Postdoc Seminar (GT GAPS). June, 2021 - May, 2023.

Teaching experiences and outreach

Summer School TA for the minicourse Floer homology fundamentals, Séminaire de Mathématiques Supérieures 2022: Floer Homotopy Theory.
Graduate Student Instructor, University of California, Berkeley
Math 54 - Linear Algebra & Differential Equations
 Fall 2018, Spring 2019.

Mentor, Berkeley Mathematics Directed Reading Program
Fall 2018, Spring 2019, Spring 2020, Spring 2022, Fall 2022.

Counselor, Program in Mathematics for Young Scientists (PROMYS), Boston University.
Summer 2015, Summer 2018.

Undergraduate Teaching Assistant, Princeton University
MAT 214 - Number Theory
Fall, 2017.
MAT 340 - Applied Algebra
Fall, 2016.