Wenyuan Li

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KAP 424A, 3620 S. Vermont Ave, Los Angeles, CA, U.S.

Education

Department of Mathematics, Northwestern University   *09/2018-06/2023*
Ph.D. in Mathematics
Advisor: Prof. Emmy Murphy & Prof. Eric Zaslow.
Thesis: Some functoriality results on microlocal sheaves over Legendrians and Lagrangians.

Department of Mathematics, Princeton University   *09/2021-06/2022*
Visiting graduate student

Department of Mathematics, Peking University   *09/2015-07/2018*
B.A. in Mathematics
Advisor: Prof. Huijun Fan,
Undergraduate thesis: Geometry of Lagrangian submanifolds in symplectic manifolds.
Department of Psychology, Peking University   *09/2014-09/2015*

Employment

Department of Mathematics, University of Southern California   *08/2023-05/2026*
Assistant Professor (RTPC) in Mathematics

Research Interest

Symplectic topology, contact topology, microlocal sheaf theory, the relation with
Lagrangian Floer theory and generating functions, and their connections to cluster
algebras, noncommutative geoemtry, mirror symmetry and persistence modules.

Papers and Preprints

Existence of generating families on Lagrangian cobordisms,
arXiv preprint, arXiv:/2308.05727.

Lagrangian cobordism functor in microlocal sheaf theory II,
arXiv preprint, arXiv:2308.05089.

Duality and spherical adjunction from microlocalization,
joint with Christopher Kuo, arXiv preprint, arXiv:2210.06643.

Conjugate fillings and Legendrian weaves,
joint with Roger Casals, arXiv preprint, arXiv:2210.02039.

Lagrangian cobordism functor in microlocal sheaf theory I,
to appear in *Journal of Topology*, arXiv:2108.10914.

Estimating Reeb chords using microlocal sheaf theory,
arXiv preprint, arXiv:2106.04079.

Research Talks

Peking University Algebra & Geometry Mini Forum
Duality and spherical adjunction from microlocalization   *Aug 01, 2023*

Georgia Topology Conference 2023
Lightning talk - Conjugate fillings and Legendrian weaves   *May 25, 2023*

Tianjin University Geometry & Topology Seminar (online)

Conjugate fillings and Legendrian weaves *Dec 16, 2022*

2nd Global Youth Forum of IGP, USTC (online)
Lagrangian cobordism functor in sheaf theory *Dec 14, 2022*

Boston College Geometry & Topology Seminar
Conjugate fillings and Legendrian weaves *Dec 01, 2022*

Northwestern Geometry & Physics Seminar
Duality and spherical adjunction for microlocal sheaves *Nov 03, 2022*

Columbia Symplectic Geometry, Gauge Theory & Categorification Seminar
Duality and spherical adjunction for microlocal sheaves *Oct 14, 2022*

UIUC Symplectic & Poisson Geometry Seminar
Conjugate fillings and Legendrian weaves *Oct 03, 2022*

Uppsala Symplectic Geometry Seminar (online)
Lagrangian cobordism functor in sheaf theory *Sep 29, 2022*

Michigan State University Geometry & Topology Seminar
Lagrangian cobordism functor in microlocal sheaf theory *Mar 01, 2022*

Symplectic Zoominar (CRM-Montréal, Princeton/IAS, Tel Aviv, and Paris)
Short talk - Estimating Reeb chords using microlocal sheaf theory *Dec 17, 2021*

EXPOSITORY TALKS

Graduate Student Seminar at Northwestern University
Families of functions and Lagrangian submanifolds *May 12, 2023*

Symplectic 'N' Contact Topology Early Career Workshop
Exotic Weinstein structure with many closed Lagrangians *Aug 09, 2022*

Virtual Kylerec Student Seminar 2021
An introduction to loose Legendrians in high dimensions *Jun 15, 2021*

Graduate Student Seminar at Northwestern University
Meromorphic differential equations and Riemann-Hilbert correspondence *Feb 19, 2021*

Graduate Student Seminar at Northwestern University
Does symplectic topology of T^*M remember the smooth topology of M? *Nov 13, 2020*

Graduate Student Seminar at Northwestern University
Asymptotically flat symplectic manifolds *Apr 19, 2019*

Mirror Symmetry Seminar run by Professor Huijun Fan & Professor Bo Dai
Keating's Lagrangian tori in four-dimensional Milnor fibers
Lagrangian surgery and computations of Maslov index *Oct, 2017*

TEACHING EXPERIENCE

GRE Sub preparation, Causeway Postbaccalaureate Certificate Program,
instructor *Summer 2022*

MATH 300-BR, Foundations of higher mathematics, TA *Summer 2022*
MATH 290-3, MENU Linear algebra and multivariable calculus III, TA *Spring 2021*
MATH 330-3, Abstract algebra III, TA *Spring 2021*
MATH 290-2, MENU Linear algebra and multivariable calculus II, TA *Winter 2021*
MATH 330-2, Abstract algebra II, TA *Winter 2021*
MATH 290-1, MENU Linear algebra and multivariable calculus I, TA *Fall 2020*

MATH 330-1, Abstract algebra I, TA	*Fall 2020*
MATH 230-1, Multi variable differential calculus, TA	*Spring 2020*
MATH 230-1, Multi variable differential calculus, TA	*Winter 2020*
MATH 220-1, Single variable differential calculus, TA	*Fall 2019*

SERVICE AND OUTREACH

Directed reading program at Northwestern	*Spring 2023*
Directed reading program at Northwestern	*Spring 2021*
Northwestern Association for Women in Mathematics mentoring program	*Spring 2021*
Northwestern Putnam training sessions	*Fall 2019*
Northwestern Putnam training sessions	*Fall 2018*

ATTENDED CONFERENCES

Symplectic Paradise - translating manifold topology to a symplectic setting	*Aug 2023*
The Los Angeles Workshop on Representations and Geometry	*Jun 2023*
Georgia Topology Conference 2023	*Apr 2023*
Cluster Algebras and Braid Varieties, AIM workshop	*Jan 2023*
Floer Homotopical Methods in Low Dimensional and Symplectic Topology	*Nov 2022*
Introductory Workshop: Floer Homotopy Theory (attended virtually)	*Sep 2022*
Connection Workshop: Floer Homotopy Theory (attended virtually)	*Sep 2022*
Symplectic 'N' Contact Topology Early Career Workshop	*Aug 2022*
Mirror Symmetry for Looijenga Interior and Beyond, IMBM (attended virtually)	*Jul 2022*
Braids in Symplectic and Algebraic Geometry, ICERM (attended virtually)	*Mar 2022*
Recent Developments in Lagrangian Floer Theory, SCGP	*Mar 2022*
Workshop on the h-Principle and Beyond, IAS	*Nov 2021*
Special Session on Legendrian Knots and Surfaces, AMS sectional meeting (virtual)	*Apr 2021*
Graduate Student Topology and Geometry Conference (virtual)	*Apr 2021*
Homological Mirror Symmetry and Applications, IMSA (virtual)	*Jan 2021*
Legendrians, Cluster Algebras, and Mirror Symmetry (virtual)	*Jan 2021*
Floer-theoretic and Algebro-geometric Aspects of SYZ Mirror Symmetry (virtual)	*Sep 2020*
Special Session on Computational Aspects of Symplectic Topology, AMS sectional meeting (virtual)	*Apr 2020*
Homological Mirror Symmetry and Topological Recursion, IMSA	*Jan 2020*