## **EMAIL**

## chrislpkuo@berkeley.edu

#### Interest

- Microlocal Sheaf Theory
- Symplectic and Contact Geometry
- D-modules
- Noncommutative geometry
- Mirror Symmetry

### **EDUCATION**

- Ph. D. in Mathematics, UC Berkeley, 2016-2022. Advisor: Vivek Shende. Thesis title: Symplectic geometric methods in microlocal sheaf theory.
- B.S. in Mathematics, National Taiwan University, Taipei, Taiwan 2010-2014. Advisor: Chung-Jun Tsai. Undergrad thesis title: A calculation for the Hard Lefschetz map on six-manifolds constructed by Coisotropic Luttinger Surgery

#### EMPLOYMENT

- Postdoc for Noncommutative Algebraic Geometry, SLMath, Spring 2024.
- Herbert and Ruth Busemann Assistant Professor in Mathematics, University of Southern California, Fall 2023, currently on leave.
- Assistant Professor (RTPC) of Mathematics, University of Southern California, Fall 2022 Spring 2023.

## RESEARCH

- On the Hochschild cohomology of Tamarkin categories. arXiv:2312.11447. Joint work with Vivek Shende and Bingyu Zhang.
- Duality and spherical adjunction for microlocal sheaves An approach by contact isotopies. arXiv:2210.06643. Joint work with Wenyuan Li.
- Perverse Microsheaves. arXiv:2209.12998. Joint work with Laurent Côté, David Nadler, and Vivek Shende.
- Wrapped sheaves. Advances in Mathematics 415 (2023): 108882.

# Ph.D. STUDENTS SUPERVISED

• Haosen Wu, current, co-supervised under Sheel Ganatra.

# TEACHING EXPERIENCE

- Instructor, Math 144, Foundations of Statistics, University of Southern California, Fall 2023
- Instructor, Math 245, Mathematics of Physics & Engineering I, University of Southern California, Spring 2023
- Instructor, Math 125g, Calculus I, University of Southern California, Fall 2022
- Graduate Student Instructor, Math 110 Linear Algebra, UC Berkeley, Spring 2020
- Graduate Student Instructor, Math 16B Analytic Geometry and Calculus, UC Berkeley, Spring 2019
- Graduate Student Instructor, Math 54 Linear Algebra and Differential Equations, UC Berkeley, Fall 2017 and Fall 2018
- Graduate Student Instructor, Math 53 Multivariable Calculus, UC Berkeley, Spring 2017
- Graduate Student Instructor, Math 1A Calculus, UC Berkeley, Fall 2016

 Teaching Assistant, Geometry (Required course for juniors), National Taiwan University, Fall 2013

#### SEMINARS

- Co-organizer, Topology seminar, University of Southern California, Fall 2022-23
- Organizer, Deformation quantization modules learning seminar, Syddansk Universitet, Spring 2022
- Organizer, Deformation quantization modules learning seminar, Syddansk Universitet, Fall 2021

## INVITED TALKS

- Globalizing the microlocal Riemann-Hilbert correspondence, Algebraic Geometry Seminar, Academia Sinica, January 2024.
- Globalizing the microlocal Riemann-Hilbert correspondence, Geometry Seminar, Kyushu University, January 2024.
- Microlocal Riemann-Hilbert correspondence, QM Research Seminar, University of Southern Denmark, December 2023.
- Microlocal Riemann-Hilbert correspondence, Bonn symplectic geometry seminar, December 2023.
- Perverse Microsheaves, Mathematics Seminars, Montana State University, October 2023.
- Perverse Microsheaves, Differential geometry and symplectic topology seminar, University of Minnesota, September 2023.
- Sheaf Theoretic Methods in Symplectic Geometry, NCTS Differential Geometry Seminar, National Center for Theoretical Sciences, Taipei City, May 2023.
- Microlocal sheaf theory in noncommutative geometry, Algebraic Geometry Seminar, Academia Sinica, Taipei City, May 2023.
- Microlocal sheaf theory in noncommutative geometry, UCSB Seminar on Geometry and Arithmetic, University of California, Santa Barbara, May 2023.
- Wrapped sheaves, Topology Seminar in USC, September 2022
- Wrapped sheaves, QM Research Seminar in SDU, March 2022
- Wrapped sheaves, U. Iowa Topology Seminar, December 2021

## Seminar and Talks

- Nondisplaceability results for Lagrangians in toric symplectic manifolds, Southern California Symplectothon, October 2022
- Hochschild homology, Deformation quantization modules learning seminar, Syddansk Universitet, February 2022
- Kernels, Deformation quantization modules learning seminar, Syddansk Universitet, December 2021
- Algebroids, Deformation quantization modules learning seminar, Syddansk Universitet, November 2021
- Nonlinear regularity and local existence, J-Holomorphic curves learning seminar, Syddansk Universitet, October 2021
- Deformation of a sheaf of rings, Deformation quantization modules learning seminar, Syddansk Universitet, October 2021
- $E_n$ -algebras and iterated loop spaces, Geometric Representation Theory seminar, UC Berkeley, Spring 2020

- Speaker, Wrapped Floer Homology Learning Seminar, Fall 2019
- Hochschild-Kostant-Rosenberg theorem through loop spaces, Geometric Representation Theory seminar, UC Berkeley, November 27 and December 14 2018
- Koszul duality for algebras, Deformation Theory Seminar, UC Berkeley, October 15 2017
- Gerbes. Mayer-Vietoris calculations, K-theory Seminar, UC Berkeley, April 2017
- Adams operation, K-theory Seminar, UC Berkeley, February 2017
- Winter Camp for Fundamentals in Mathematics for College Students, National Taiwan University, January 23-February 8, 2013

# Professional Service

- Co-organizer, The Los Angeles Workshop on Representations and Geometry (LAWRGe), Summer 2023
- Referee for Annals of Mathematics

# Awards and Honors

- Shing-Tung Yau College Student Mathematics Contest, Bronze medal in geometry and topology, 2014
- Honors Program in Mathematics, National Taiwan University, 2014
- Chow Hung-Ching Scholarship, Institute of Mathematics Academia Sinica, 2013