Christopher Kuo **Curriculum Vitae (November 11, 2025)**

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

EDUCATION AND TRAINING
- Ph.D. in Mathematics, UC Berkeley, 2016-2022, awarded on May 13, 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.
  Tthesis title: A calculation for the Hard Lefschetz map on six-manifolds constructed by Coisotropic Luttinger Surgery

APPOINTMENTS
- Postdoc at the Max Planck Institute for Mathematics, Summer 2025 - Present.
- Postdoc for Noncommutative Algebraic Geometry, SLMath, Spring 2024.
- Assistant Professor (RTPC) of Mathematics, University of Southern California, Fall 2022 - Spring 2025.
  — Herbert and Ruth Busemann Assistant Professor in Mathematics, Fall 2023 - Spring 2024.

RESEARCH
- Sheel Ganatra, C. Kuo, Wenyuan Li, and Haosen Wu. *Integral transforms and compactness*, in preparation.
- Tomohiro Asano, Yuichi Ike, C. Kuo, and Wenyuan Li. *C^0-rigidity of Legendrians and coisotropics via sheaf quantization*, arXiv:2510.01746.
- C. Kuo and Harold Williams. *Tropical Lagrangian coamoebae and free resolutions*. arXiv:2412.18071.
- C. Kuo and Wenyuan Li. *Relative Calabi-Yau structure on microlocalization*. arXiv:2408.04085.
- C. Kuo and Wenyuan Li. *Duality and Kernels in Microlocal Geometry*, IMRN 2025 (2025): rnaf070. (arXiv:2405.15211)
- Laurent Côté, C. Kuo, David Nadler, and Vivek Shende. *The microlocal Riemann-Hilbert correspondence for complex contact manifolds*. arXiv:2406.16222.
- C. Kuo, Vivek Shende, and Bingyu Zhang. *On the Hochschild cohomology of Tamarkin categories*. arXiv:2312.11447.
- C. Kuo and Wenyuan Li. *Spherical adjunction and Serre functor from microlocalization*. arXiv:2210.06643.
- Laurent Côté, C. Kuo, David Nadler, and Vivek Shende. *Perverse Microsheaves*. arXiv:2209.12998.
- C. Kuo. *Wrapped sheaves*, Advances in Mathematics 415 (2023): 108882. (arXiv:2102.06791)

PH.D. STUDENTS SUPERVISED
- Haosen Wu, current, co-supervised with Wenyuan Li under Sheel Ganatra.

Teaching Experience

- Instructor, Math 125, Calculus I, University of Southern California, Spring 2025
- Instructor, Math 425a, Fundamental Concepts of Analysis, University of Southern California, Spring 2025
- Instructor, Math 425a, Fundamental Concepts of Analysis, University of Southern California, Fall 2024
- 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

- Organizer, Microlocal learning seminar, University of Southern California, Spring 2025
- Co-organizer, Topology seminar, University of Southern California, Fall 2022-Spring 2025
- Organizer, Deformation quantization modules learning seminar, Syddansk Universitet, Fall 2021 - Spring 2022

Invited Talks

- Perverse microsheaves on contact manifolds, seminar at the Chair of Arithmetic Geometry, EPFL, November 2024.
- Riemann-Hilbert on contact manifolds, MPI-Oberseminar, MPIM, August 2025.
- Tropical Lagrangian coamoebae and free resolutions, Syzygies and Mirror Symmetry Virtual Seminar, April 2025.
- Symplectic Geometry and Sheaves, Geometry and Topology Seminar, UC Irvine, November 2024.
- A quick introduction of microlocal sheaf theory, NAG GRT Seminar, SLMath, February 2024.
- Globalizing the microlocal Riemann-Hilbert correspondence, Algebraic Geometry Seminar, UC Davis, January 2024.
- 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, Univer-

sity 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

- Recollection on analytic stacks, Arbeitsgruppe Arithmetische Geometrie und Darstellungstheorie (ARGOS), MPIM, WiSe 2025.
- Sheaf quantization and the topology of cotangent bundles, guest lecture in Sheel Ganatra's Math 699, USC, Fall 2022
- 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

- Beisitzer, Introduction to symplectic geometry, Universität Bonn, SoSe 2025
- Master thesis second reader, Universität Bonn, SoSe 2025
- Topology Screening Exam Committee, University of Southern California, Fall 2024
- Co-organizer, The Los Angeles Workshop on Representations and Geometry (LAWRGe), Summer 2023
- Referee for Annals of Mathematics, Compositio, and G&T

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