Yu (Leon) Liu

yuleonliu@math.harvard.edu
https://leon2k2k2k.github.io

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Education

- **Harvard University** — August 2021 - Present
  Ph.D. in Mathematics
- **The University of Texas at Austin** — August 2017 - December 2020
  B.S. in Mathematics

Papers and Preprints

- **Abelian duality in topological field theory** — December 2021
  Accepted to Communications in Mathematics and Physics
- **Constructing the Virasoro groups from differential cohomology** — December 2021
  Accepted to International Mathematics Research Notices. — *joint with A. Debray, C. Weis*
- **Braided monoidal $(\infty, 2)$ category of Soergel bimodules** — In preparation
  joint with Aaron Mazel-Gee, David Reutter, Catherina Stroppel, and Paul Wedrich.

Services

- **DRP mentorship** — Fall 2021
  Mentor two undergrads in TQFT
- **Reflection posivity seminar** — Spring 2022
  Co-organized an online seminar on Freed-Hopkins' invertible phases paper.
- **DRP mentorship** — Fall 2022
  Mentor one math undergrad and 3 physics undergrads
- **Topological order seminar** — Fall 2022
  Organizing a seminar on topological order in $2D$ and their higher dimensional analogues.
- **DRP mentorship** — Spring 2023
  Mentor two undergrad on SUSY field theories

Teaching

- **M1b TF** — Spring 2023 / *Harvard*
  Teaching an entire section on second course of calculus
- **M132b CA** — Spring 2023 / *Harvard*
  Course assistant for Hopkin's differential topology course

Research talks, Posters

- **Virasoro and Differential Cohomology** — March 2022 / *Georgia Tech*
  GSTGC 2022
- **Long exact sequence in the symmetry broken phase (Poster)** — June 2022 / *Perimeter Institute*
  Global Categorical Symmetry
- **Stratification in Physical Systems** — Nov 2022 / *UCLA*
  UCLA Algebraic Topology seminar
- **Symmetry breaking and crystalline phase** — March 2023 / *Las Vegas*
  APS March Meeting