

Elliot Kienzle

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Education

- BA** **University of Maryland**, Mathematics and Physics Sept 2018 – May 2022
- GPA: 3.92/4.0, with high honors
- PhD** **University of California, Berkeley**, Mathematics Sept 2022 – present
- Advisor: Constantin Teleman
 - Studying symplectic packing problems using geometric quantization

Publications

- Hyperbolic Band Theory through Higgs Bundles** May 2022
- Elliot Kienzle*, Steven Rayan
- Advances in Mathematics, Volume 409, Part B, 2022

Talks

- From Hyperbolic Crystals to Stable Bundles: Moduli spaces in spectral theory** Oct 2022
- MSRI gauge theory graduate student seminar. [Video](#) 🔗
- Hyperbolic Band Theory through Higgs Bundles**
- AMS Contributed Paper Session on Applied Topics - Quantum Theory, Mechanics, and Fluids, Joint Mathematics Meeting (April 2022)
 - Geometry and Mathematical Physics Seminar at University of Saskatchewan (September 2021)
- Manifesting Mathematical Worlds in Digital Art** July 2024
- Illustrating math seminar. [Video](#) 🔗
- Vignettes of caustic and catastrophes** Oct 2024
- USF Math undergraduate seminar

Teaching

- Graduate student instructor**, UC Berkeley Fall 2022 - Spring 2023
- MATH53, Multivariable calculus (Fall 2022)
 - MATH54, Linear algebra (Spring 2023)
- Math crafts: How things curve**, UC Berkeley Spring 2024
- Hands-on introduction to curvature and creative mathematics. Each week, we'd build a arts and crafts project exploring curvature and its many manifestations.
- MATH299G: Geometry in physics**, University of Maryland Fall 2021
- Seminar style to differential forms and geometry, and their role in physics. Focused on the differential forms interpretation of maxwells equations, and the symplectic geometry formulation of classical mechanics.

Service and Mentorship


- Directed reading program mentor** Fall 2023-Fall 2024
- Topics: Mirror symmetry, Chern-Weil theory, iterated function systems

Seminars organized

- Coloumb branch reading seminar (Spring 2023)
- Chern-Simons learning seminar (Spring 2024)
- Student Symplectic Seminar (Fall 2024)

Outreach

Exhibited mathematical art

- ‘Intersections: Art, Truth, Humanity’ at the Seattle Universal Math Museum (SUMM). (Spring 2025)
- JMM 2024 Mathematical art exhibition. (January 2024) [Link](#) 

Expand Your Horizons workshop leader

Spring 2024

- STEM outreach for middle school girls.

Interpreter at National Museum of Mathematic (MoMath)

Summer 2022

- Worked as a docent, explaining mathematical concepts to members of the general public

Awards

NSF Graduate research fellow

Fall 2023-present

John and Sabrina Kontner Endowed Scholarship (2022)

- Merit scholarship, University of Maryland Math department

Strauss scholarship (2022)

- Awarded to one outstanding Mathematics major, University of Maryland

Higginbotham scholarship (2022)

- Awarded to one outstanding Mathematics major, University of Maryland