Tyson Klingner

University of Washington Seattle, WA
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Education

University of Washington 2023–present
Ph.D. in Mathematics Seattle, WA

Advisors: Sándor Kovács and Giovanni Inchiostro

The University of Adelaide 2021–2022
Master of Philosophy in Mathematics Adelaide, Australia

Advisor: David Baraglia

The University of Adelaide 2018–2020
Bachelor of Mathematical Sciences (Advanced) Adelaide, Australia

Research Interests

Algebraic geometry, birational geometry, moduli spaces, and algebraic stacks.

Publications and Preprints

[1]. **Characterizing Contractions and Weighted Blowdowns**
Soham Ghosh and Tyson Klingner
Preprint, 2026. arXiv:2609.04023.

[2]. **Spectral data of special orthogonal Higgs bundles and Hecke modification**
Tyson Klingner
The Quarterly Journal of Mathematics **75** (2024), no. 4, 1529–1553. doi:10.1093/qmath/haae057.

[3]. **Evaluation of LLMs for Mathematical Formalization in Lean**
Tyson Klingner, Drew Bladek, Escher Crawford, Bohao Chen, Ariel Fu, Kaira Nair, Jarod Alper, Giovanni Inchiostro, and Vasily Ilin
Preprint, 2026. arXiv:2606.05632.

Teaching

Grader, Math 534 Autumn 2026

Instructor, Math 207 Summer 2026
Lectured the course, prepared course materials, and wrote and administered the exams.

Teaching Assistant, Math 126 Winter 2026

Teaching Assistant, Math 125 Autumn 2025

Lead Teaching Assistant, Math 208 Winter 2025

Teaching Assistant, Math 125 Autumn 2024

Teaching Assistant, Math 125 Summer 2024

Teaching Assistant, Math 125 Winter 2024

Teaching Assistant, Math 125 Autumn 2023

Additional teaching experience. Tutoring and marking in mathematics at the University of Adelaide and related programs, including complex analysis, vector calculus, integration and analysis, differential equations, and introductory mathematics (2021–2023).

Mentoring

Undergraduate Research Mentor, UW Math AI Lab 2026
Led a group of undergraduate researchers studying large language models for mathematical formalization in Lean; the project resulted in the preprint *Evaluation of LLMs for Mathematical Formalization in Lean.*

Mentor, Washington Directed Reading Program Spring 2024
Exploring the Complex World. Mentee: Brinda Moudgalya.
Mentored an undergraduate reading project introducing complex analysis, including contour integration, Cauchy's theorems, and residue theory.

Talks

Canonical Model of Surfaces Spring 2026
UW Student Algebraic Geometry Seminar

Surface Singularities Winter 2026
UW Student Algebraic Geometry Seminar

Uniformization of Stacky Curves Autumn 2025
UW Student Algebraic Geometry Seminar

Yau's Proof of the Calabi Conjecture Winter 2025
UW Student Differential Geometry Seminar

Eigenvalues and Much More Spring 2024
1-2-3 Seminar, University of Washington

Introduction to Complex Algebraic Geometry November 2023
UW Student Algebraic Geometry Seminar

Langlands Duality in the Hitchin System June 2022
Australian Postgraduate Algebra Colloquium

Spectral Curve Correspondence May 2022
Geometry and Topology Squared Seminar

Spectral data of L-twisted Higgs bundles and Langlands duality March–April 2022
AYAPS, Adelaide

Academic Service

Organizer, Deformation Theory Seminar, University of Washington — Spring 2026

Organizer, Student Differential Geometry Seminar, University of Washington — 2024–2025

Awards and Funding

Fulbright Australia Future Scholarship (Postgraduate) — 2023–2028

University of Adelaide Research Scholarship, Master of Philosophy — 2021–2022

Summer Research Project Scholarship, University of Adelaide — 2020

JR Wilton Prize, University of Adelaide — 2020

ES Barnes Prize, University of Adelaide — 2020

David Murray Prize, University of Adelaide — 2020

Dean's Recognition of Academic Excellence Award, University of Adelaide — 2019, 2020

Last updated September 2026