SHING TAK LAM

Mathematics Institute, University of Warwick
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RESEARCH INTERESTS

Canonical metrics in Kähler geometry, Gauge theory, Geometric flows, Moment maps, Stability conditions and Moduli.

EDUCATION

University of Warwick *2025–28*
Doctor of Philosphy (in progress)
PhD in Complex Differential Geometry supervised by Ruadhaí Dervan.

University of Glasgow *2024–25*
First year of PhD in Complex Differential Geometry supervised by Ruadhaí Dervan.
Aligned student on the Algebra, Geometry and Quantum Fields CDT.

University of Cambridge *2023–24*
Master of Mathematics *Distinction - 90%, ranked 17 out of 294*
Courses in Algebra, Algebraic Geometry, Differential Geometry and Partial Differential Equations.
Part III essay titled "Quantum cohomology and the Seidel representation" supervised by Jack Smith.

University of Cambridge *2020–23*
Bachelor of Arts *First class honours*

PREPRINTS

Canonical Metrics on Families of Vector Bundles arXiv:2512.04017

CONFERENCE TALKS

Fibrations and Deformations, Brest *Jun 2025*
Canonical Metrics on Families of Vector Bundles

JUNIOR SEMINAR TALKS

Warwick Postgraduate Seminar *Nov 2025*
Symmetries and Dynamics - Introduction to symplectic geometry

Warwick Junior Algebraic Geometry Seminar, *May 2025*
Canonical Metrics on Families of Vector Bundles

OTHER TALKS

AGQ CDT Reading group on *Gauge theoretic invariants* *Nov 2025*
Compactness and Wall-Crossing

Learning seminar on *Moduli of weighted hyperplane arrangements* *Nov 2025*
Introduction to toric varieties

AGQ CDT Reading group on *Gauge theoretic invariants* *Oct 2025*
Introduction to Gauge Theory and Seiberg–Witten invariants

Reading group on *K-stability of Fano Varieties* *Jun 2025*
The α- and δ-invariants

Glasgow Geometry and Topology Pre-Seminar *Mar 2025*
Gauge theory and Floer theory

Reading group on *Positivity in Algebraic Geometry* *Feb 2025*
Big line bundles, Volume and Zariski decomposition

AGQ CDT Reading group on *Algebraic Stacks* *Feb 2025*
Deformation theory and smoothness
AGQ CDT Reading group on *Geometric Invariant Theory* *Dec 2024*
The Kempf-Ness theorem
AGQ CDT Examples showcase *Nov 2024*
Blowing up and rational elliptic surfaces
Part III Seminar *Mar 2024*
Symplectic Reduction
Part III Seminar *Dec 2023*
Morse theory
Cambridge Summer Research Festival *Oct 2023*
Hyperkähler structures on nilpotent $\mathrm{SL}(n, \mathbb{C})$ *orbits*
Cambridge Summer Research Festival *Oct 2022*
On generalised hardness of approximation in optimisation and data science

ORGANISATION

Reading group on Geometric Invariant Theory *Autumn 2024*

TEACHING

TBC *Term 2 2025-26*

EXPERIENCE

Summer research internship, University of Cambridge Summer 2023
Summer project supervised by Alexei Kovalev, studying hyperkähler metrics on coadjoint orbits.

Summer research internship, University of Cambridge Summer 2022
Summer project supervised by Anders Hansen, studying (non-)computability of optimisation problems.

PRIZES AND SCHOLARSHIPS

Clemmow/B Talbot Prize, K Roth Prize *2023*
Awarded for highest first in Part II Mathematics at Peterhouse
Senior Burkhill Prize for Mathematics, Routh prize for Mathematics *2022*
Awarded for highest first in Part IB Mathematics at Peterhouse
Summer Reseach Bursary *2022, 2023*
Funding from the Faculty of Mathematics for summer research projects.
Scholarship in Mathematics *2021-24*
Scholar of Peterhouse, University of Cambridge
College prize *2021, 2022, 2023, 2024*
College prize for academic achievement

CONFERENCES

Degenerations in Complex Geometry, Institut Mittag-Leffler *Jun-Jul 2026*
Integrable Day 2025, Loughborough *Nov 2025*
COW, Warwick *Nov 2025*
VII BrAG Meeting, Nottingham *Sep 2025*
Singular canonical Kähler metrics on compact and non-compact manifolds, Budapest *Sep 2025*
Summer Research Institute in Algebraic Geometry, Colorado *Jul 2025*
Fibrations and Deformations, Brest *Jun 2025*
Winter School on K-stability, CIRM, Luminy *Mar 2025*
UKAG Network Winter School, Lancaster *Dec 2024*
GLEN, Glasgow *Dec 2024*

SKILLS

Programming Languages
Haskell, Python, Julia, Mathematica, Rust
Languages
Native: English, Cantonese, Mandarin
Basic: French, Spanish

Last updated: December 4, 2025