Caleb Suan Kai Wen (孙凯文)

Contact Information	• Email: *calebkw@math.ubc.ca* • Personal Website: *https://calebsuan.github.io*

Research Interests

Geometric analysis; Geometric flows (G_2 Laplacian Flow/ Coflow, Anomaly Flow); Manifolds with special holonomy ($SU(3), G_2, Spin(7)$).

Education

The University of British Columbia, Vancouver, BC, Canada

Ph.D, Mathematics   Sep 2021 - Present
- Supervisor: Sébastien Picard

University of Waterloo, Waterloo, ON, Canada

MMath, Pure Mathematics,   Jan 2020 - Dec 2020
- Thesis: *Differential Operators on Manifolds with G_2-Structure*
- Supervisor: Spiro Karigiannis

BMath, Pure Mathematics/ Combinatorics and Optimization,   Sep 2013 - Dec 2019
- Honors, Co-operative Program
- With Distinction

Preprints and Publications

[1] B. Friedman, S. Picard, and C. Suan; *"Gromov–Hausdorff Continuity of Non-Kähler Calabi–Yau Conifold Transitions"*, arXiv:2404.11840

[2] S. Picard and C. Suan; *"Flows of G_2 Structures associated to Calabi–Yau Manifolds"*; to appear in *Mathematical Research Letters*, arXiv:2209.03411

Invited Talks

- CRM Workshop: Special Riemannian Geometries in Dimensions 6, 7, 8 (Apr 2024)

  "Gromov–Hausdorff Continuity of Non-Kähler Calabi–Yau 3-Folds"

- UC – Irvine Generalized Ricci Flow Learning Seminar (Dec 2023)

  "Flows of G_2 Structures associated to Calabi–Yau Manifolds"

- BIRS Workshop: Spinorial and Octonionic Aspects of G_2 and $Spin(7)$ Geometry (May 2023)

  "Flows of G_2 Structures associated to Calabi–Yau Manifolds"

Teaching

The University of British Columbia, Vancouver, BC, Canada

Teaching Assistant   Sep 2021 - Present
- MATH 264: Vector Calculus for Electrical Engineering (2023 Winter Term II)
- MATH 180: Differential Calculus with Applications (2023 Winter Term I)
- MATH 220: Mathematical Proof (2022 Winter Term II)
- MATH 190: Calculus Survey (2022 Winter Term I)
- MATH 421: Real Analysis II (2021 Winter Term II)
- MATH 223: Linear Algebra (2021 Winter Term I)

University of Waterloo, Waterloo, ON, Canada

Teaching Assistant   Jan 2020 - Dec 2020

- PMATH 365: Differential Geometry (Winter 2020)
- MATH 136: Linear Algebra 1 for Honours Mathematics (Winter 2020)
- PMATH 352: Complex Analysis (Spring 2020)
- PMATH 465: Geometry of Manifolds (Fall 2020)
- MATH 147: Calculus 1 (Advanced Level) (Fall 2020)

Undergraduate Tutor   Sep 2016 - Dec 2016

- MATH 137: Calculus 1 for Honours Mathematics (Fall 2016)

OTHER
RESEARCH

University of Waterloo, Waterloo, ON, Canada

NSERC Undergraduate Research Assistant   May 2019 - Aug 2019

- Project: *The Almost Invariant Subspace Problem*
- Supervisor: Laurent Marcoux

NSERC Undergraduate Research Assistant   May 2018 - Aug 2018

- Project: *Vortex Solutions on Riemann Surfaces from Hyperbolic Tessellations*
- Supervisor: Benoit Charbonneau

AWARDS AND
SCHOLARSHIPS

- Four Year Doctoral Fellowship   2021
  The University of British Columbia

- President's Academic Excellence Award   2021
  The University of British Columbia

- NSERC Alexander Graham Bell Canada Graduate Scholarship - Masters   2021
  University of Waterloo

- President's Graduate Scholarship   2021
  University of Waterloo

- Outstanding Teaching Assistant Award   2020
  University of Waterloo

- NSERC Undergraduate Student Research Award   2020
  University of Waterloo

- NSERC Undergraduate Student Research Award   2019
  University of Waterloo

- University of Waterloo 50th Anniversary Scholarship   2018
  University of Waterloo

- Faculty of Mathematics Scholarship   2014
  University of Waterloo

- University of Waterloo President's Scholarship   2014
  University of Waterloo