

## Caleb Suan Kai Wen (孙凯文)

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CONTACT INFORMATION	<ul style="list-style-type: none"><li>• Email: <a href="mailto:calebkw@math.ubc.ca">calebkw@math.ubc.ca</a></li><li>• Personal Website: <a href="https://calebsuan.github.io">https://calebsuan.github.io</a></li></ul>
RESEARCH INTERESTS	Geometric analysis; Geometric flows ( $G_2$ Laplacian Flow/ Coflow, Anomaly Flow); Manifolds with special holonomy ( $SU(3)$ , $G_2$ , $Spin(7)$ ); The Hull–Strominger system.
EDUCATION	<p><b>The University of British Columbia</b>, Vancouver, BC, Canada</p> <p><b>Ph.D</b>, Mathematics Sep 2021 - Present (Aug 2025 Expected)</p> <ul style="list-style-type: none"><li>• Supervisor: <b>Sébastien Picard</b></li></ul> <p><b>University of Waterloo</b>, Waterloo, ON, Canada</p> <p><b>MMath</b>, Pure Mathematics, Jan 2020 - Dec 2020</p> <ul style="list-style-type: none"><li>• Thesis: <i>Differential Operators on Manifolds with <math>G_2</math>-Structure</i></li><li>• Supervisor: <b>Spiro Karigiannis</b></li></ul> <p><b>BMath</b>, Pure Mathematics/ Combinatorics and Optimization, Sep 2013 - Dec 2019</p> <ul style="list-style-type: none"><li>• Honors, Co-operative Program</li><li>• With Distinction</li></ul>
PREPRINTS AND PUBLICATIONS	<p>[1] Caleb Suan; “Anomaly Flow: Shi-Type Estimates and Long-time Existence”, preprint, <a href="https://arxiv.org/abs/2408.15514">arXiv:2408.15514</a></p> <p>[2] <b>Henrique N. Sá Earp</b>, <b>Julieth Saavedra</b>, and Caleb Suan; “Laplacian Coflows of <math>G_2</math>-Structures on Contact Calabi–Yau 7-Manifolds”, preprint, <a href="https://arxiv.org/abs/2406.15254">arXiv:2406.15254</a></p> <p>[3] <b>Benjamin Friedman</b>, <b>Sébastien Picard</b>, and Caleb Suan; “Gromov–Hausdorff Continuity of Non-Kähler Calabi–Yau Conifold Transitions”, preprint, <a href="https://arxiv.org/abs/2404.11840">arXiv:2404.11840</a></p> <p>[4] <b>Sébastien Picard</b> and Caleb Suan; “Flows of <math>G_2</math> Structures associated to Calabi–Yau Manifolds”, to appear in <i>Mathematical Research Letters</i>; <a href="https://arxiv.org/abs/2209.03411">arXiv:2209.03411</a></p>
INVITED TALKS	<ul style="list-style-type: none"><li>• <b>CRM Workshop: Special Riemannian Geometries in Dimensions 6, 7, 8</b> (Apr 2024) “Gromov–Hausdorff Continuity of Non-Kähler Calabi–Yau 3-Folds”</li><li>• <b>UC - Irvine Generalized Ricci Flow Learning Seminar</b> (Dec 2023) “Flows of <math>G_2</math> Structures associated to Calabi–Yau Manifolds”</li><li>• <b>BIRS Workshop: Spinorial and Octonionic Aspects of <math>G_2</math> and <math>Spin(7)</math> Geometry</b> (May 2023) “Flows of <math>G_2</math> Structures associated to Calabi–Yau Manifolds”</li></ul>
TEACHING	<p><b>The University of British Columbia</b>, Vancouver, BC, Canada</p> <p><i>Small Class/ Workshop Instructor</i> Sep 2021 - Present</p> <ul style="list-style-type: none"><li>• MATH 180: Differential Calculus with Applications (2024 Winter Term I)</li><li>• MATH 180: Differential Calculus with Applications (2023 Winter Term I)</li><li>• MATH 190: Calculus Survey (2022 Winter Term I)</li></ul>

*Teaching Assistant* Sep 2021 - Present

- MATH 264: Vector Calculus for Electrical Engineering (2023 Winter Term II)
- MATH 220: Mathematical Proof (2022 Winter Term II)
- 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