

Joseph Alexander Wilson

jo.alex.w@gmail.com jollywatt.github.io Cambridge, UK

Education

- 2024-present **PhD in Engineering, CAMBRIDGE UNIVERSITY**
Applications of geometric algebra in engineering, supervisor Prof. Joan Lasenby.
- 2021–2022 **Master of Science with Distinction, VICTORIA UNIVERSITY OF WELLINGTON**
Thesis [Geometric Algebra for Special Relativity and Manifold Geometry](#) supervised by Dr. Matt Visser, GPA 9/9.
- 2020 **Postgraduate Certificate in Science, UNIVERSITY OF CANTERBURY**
Literature review [An Overview of the Strong CP Problem and Axion Cosmology](#) supervised by Dr. Jenni Adams, GPA 9/9.
- 2017–2019 **Bachelor of Science with First Class Honours, UNIVERSITY OF CANTERBURY**
Honours project [Asymptotic Structure and Symmetries of FLRW Universes](#) supervised by Dr. David Wiltshire, GPA 9/9. Included summer research projects:
[Visualising the Freudreich 1998 Model of the Galactic Bar and Disk](#)
[Computing Crystal Band Structures with CP2K](#)

Skills and Interests

- Broad interests in software, mathematics, pedagogy
- Open source [GeometricAlgebra.jl](#) (Julia), [fletcher](#) (Typst)
- Languages English, French (CEFR B1)
- Hobbies Piano, modern jive dance
- Design Scientific typesetting, graphic design, web design
- Code Julia, Rust, Python, R, Git, Unix, Node, React JS

Work experience

- References available on request
- 2022–2024 **Statistical and Data Analyst, STATISTICS NEW ZEALAND**
Technical leader in the Statistical Computing Network, led R FOR DATA SCIENCE book club.
- 2021 **Tutor and lab demonstrator, VICTORIA UNIVERSITY OF WELLINGTON**
- 2020 **Tutor and teacher's assistant, UNIVERSITY OF CANTERBURY**

Publications

- 2021 [Explicit BCHD formula for Spacetime via Geometric Algebra](#)
J. Wilson, M. Visser, INT. J. OF GEOMETRIC METHODS IN MODERN PHYSICS