
Employment**Postdoctoral Research Associate***School of Medical Sciences, University of New South Wales*

Start Date: February 2024

Postdoctoral Research Associate*Department of Physics, University of Durham*

February 2021–February 2023

IAS Early Career Fellow*Institute for Advanced Study, University of Warwick*

October 2020–February 2023

Education**University of Warwick**

(2017-2020)

Doctorate

Thesis Title: The Topology and Geometry of Liquid Crystals

University of Warwick

(2016-2017)

MSc in Mathematics of Systems

University of Oxford

(2015-2016)

MSc in Mathematics and Computer Science

University of Oxford

(2012-2015)

BSc in Mathematics and Computer Science

Publications

- [J. Pollard](#) and G.P. Alexander, *Contact Topology and the Classification of Disclination Lines in Cholesteric Liquid Crystals*, Phys. Rev. Lett. **130**, 228102 (2023).
- [J. Pollard](#) and S.M. Fielding, *Yielding, Shear Banding and Brittle Failure of Amorphous Materials*, Phys. Rev. Research **4**, 043037 (2022).
- J. Eun, [J. Pollard](#), S.-J. Kim, T. Machon, and J. Jeong, *Layering Transitions and Metastable Structures of Cholesteric Liquid Crystals in Cylindrical Confinement*, PNAS **118**, e2102926118 (2021).
- [J. Pollard](#) and G.P. Alexander, *Intrinsic geometry and director reconstruction for three-dimensional liquid crystals*, New Journal of Physics **23**, 063006 (2021).
- J. Binysh, [J. Pollard](#), and G.P. Alexander, *Geometry of Bend: Singular Lines and Defects in Twist-Bend Nematics*, Phys. Rev. Lett. **125**, 047801 (2020).
- [J. Pollard](#), G. Posnjak, S. Čopar, I. Muševič, and G. P. Alexander, *Point defects, Topological Chirality, and Singularity Theory in Cholesteric Liquid-Crystal Droplets*, Phys. Rev. X **9**, 021004 (2019).

Conferences and Presentations

- *Chiral Liquid Crystals Seen Through the Lens of Contact Topology*, Applied Maths Seminar, UNSW, 2024
- *The topological classification of defects in cholesteric liquid crystals*, Soft Matter Seminar, Johns Hopkins University, 2023.
- *The topological classification of defects in cholesteric liquid crystals*, Soft Matter Seminar, University of Bristol, 2022.
- *The topological classification of defects in cholesteric liquid crystals*, LMS-DOS Meeting on Anisotropic Materials, University of Durham, 2022.
- *Geometric frustration in liquid crystals*, Soft Matter Seminar, University of Durham, 2021.
- *The geometry of bend*, Soft Matter Seminar, University of Warwick, 2020.
- *Point defects, Topological Chirality, and Singularity Theory in Cholesteric Liquid-Crystal Droplets*, Soft Matter Seminar, University of Warwick, 2019.
- *Point defects, Topological Chirality, and Singularity Theory in Cholesteric Liquid-Crystal Droplets*, Playing Colloidal Mikado Workshop, University of Oxford, 2018.

Teaching

Joint supervision of 4th year student project, University of Durham, 2022-2023.

References

Professor Suzanne Fielding, University of Durham (suzanne.fielding@durham.ac.uk)

Dr Gareth Alexander, University of Warwick (g.p.alexander@warwick.ac.uk)

Dr Thomas Machon, University of Bristol (t.machon@bristol.ac.uk)