Joshua Wrigley

Curriculum Vitae

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Appointments

Jan.-Dec. 2025 Université Paris Cité - Paris, France

Postdoctoral Researcher (Chercheur du CNRS),

Employed on the project: *Topology for Types and Terms*.

Principal investigator: Prof. Sam van Gool.

Apr.-Dec. 2024 Queen Mary University of London - London, UK

Postdoctoral Researcher,

Principal investigator: Ivan Tomašić.

Grants

2024 – 2025 **Research Co-Lead:** *Toward a Cohomology of Theories*,

EPSRC Mathematical sciences small grant (£80,860),

Principal investigator: Ivan Tomašić.

Authored the vision and approach sections of the successful submission.

Education

2020 – 2024 Università degli Studi dell'Insubria – Como, Italy

Dottorato di ricerca in informatica e matematica del calcolo (PhD),

Thesis: Doctrinal and Groupoidal Representations of Classifying Topoi,

Awarded cum laude,

Supervisor: Prof. Olivia Caramello.

2019 – 2020 Lincoln College, University of Oxford – Oxford, UK

Masters in Mathematics (MMath), Classification: First class, Dissertation: *Aspects of Stone Duality for Boolean Algebras*,

Supervisor: Prof. Hilary Priestley.

2016 – 2019 Lincoln College, University of Oxford – Oxford, UK

Bachelor of Mathematics (BA), Classification: First class.

Publications

2026 On Topological Groupoids that Represent Theories,

Zeitschrift für Mathematische Logik und Grundlagen der Mathematik, to appear (2026) (link).

2024 Some Properties of Internal Locale Morphisms Externalised,

Theory and Applications of Categories, Vol. 41, 2024, No. 35, pp 1160-1202 (link).

The Representing Localic Groupoid for a Geometric Theory, with Graham Manuell,

Expositions in Theory and Applications of Categories, 2024, No. 2, pp 1-41 (link).

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- 2025 On the theories classified by an étendue, arXiv:2507.04526 (13 pages).
- 2025 **Ultracategories via Kan extensions of relative monads**, with Umberto Tarantino, arXiv:2506.09788 (41 pages).
- 2025 **Day algebras**, with Edmund Robinson, arXiv:2504.06200 (21 pages).
- Topoi with enough points and topological groupoids, arXiv:2408.15848 (31 pages, under second review in *Journal of Pure and Applied Algebra*).
- Existentially closed models and locally zero-dimensional toposes, with Mark Kamsma, arXiv:2406.02788 (30 pages).
- The Geometric Completion of a Doctrine, arXiv:2304.07539 (63 pages, under second review in *Annals of Pure and Applied Logic*).

Teaching experience

2025 **Graduate teaching** (Universitè Paris Citè)

Duality and categorical logic – 12hrs (course lecturer: Sam van Gool).

Lectured exercise classes, including assisting with course design and preparing problem sheets.

- 2022 2024 Graduate teaching (Università degli Studi dell'Insubria)
 - *Topics in category theory* 36 hrs (course lecturer: Prof. Olivia Caramello),
 - *Topos theory* 36 hrs (course lecturer: Prof. Olivia Caramello).

Lectured exercise classes and prepared corresponding lecture notes and problem sheets.

- 2021 2022 **Undergraduate teaching** (Università degli Studi dell'Insubria)
 - Algebra 1 12 hrs (course lecturer: Prof. Valerio Monti),
 - Algebra 2 12 hrs (course lecturer: Prof. Valerio Monti),
 - *Geometria 1* 12 hrs (course lecturer: Prof. Olivia Caramello).

Prepared and taught exam revision lessons, including preparation of problem sheets. Taught in Italian.

Invited talks

Dec. 18, 2024 Theories, topological groupoids and topoi.

Categorical Logic and Higher Categories, University of Manchester, UK.

Professional activities

Dec. 2025 Scientific committee

6th ItaCa Workshop, Milan, Italy.

June 27, 2025 **PhD examiner**

Kristóf Kanalas (Masaryk University, Czechia).

Journal referee

Theory and Applications of Categories; Applied Categorical Structures.

2024 Undergraduate admissions interviewer

Natural sciences, St Edmund's college, Cambridge.

Sept. 8-9, 2022 Local Organiser

9th Symposium on Compositional Structures, Como, Italy.