

BRYCE CLARKE

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ACADEMIC EMPLOYMENT

- May 2024 – now **Tallinn University of Technology (Estonia)**
Postdoctoral Researcher, Department of Software Science, [Logic and Semantics Group](#)
- Mar 2022 – Apr 2024 **INRIA Saclay Centre (France)**
Postdoctoral Researcher, [PARTOUT team](#)

EDUCATION

- 2019 – 2022 **Macquarie University (Australia) - PhD in Mathematics**
Thesis: [The double category of lenses](#)
Supervisors: Prof. Michael Johnson and Prof. Dominic Verity
Awarded the Vice-Chancellor's Commendation for Excellence
- 2018 **Macquarie University (Australia) - Master of Research in Mathematics**
Thesis: Characterising asymmetric lenses using internal categories
Supervisor: Prof. Michael Johnson
- 2016 **University of New England (Australia) - Bachelor of Science with Honours**
Thesis: Representations of finite groups
Supervisor: Prof. Gerd Schmalz
Awarded the University Medal and the Edgar H. Booth Memorial Prize
- 2013 – 2015 **University of New England (Australia) - Bachelor of Science**
Major in Mathematics

RESEARCH PUBLICATIONS AND PREPRINTS

8. **Bryce Clarke**. [Lifting twisted coreflections against delta lenses](#), *Theory and Applications of Categories*, Vol. 41 (2024).
 7. **Bryce Clarke**, Derek Elkins, Jeremy Gibbons, Fosco Loregian, Bartosz Milewski, Emily Pillmore, and Mario Román. [Profunctor optics, a categorical update](#). *Compositionality*, Vol. 6 (2024).
 6. **Bryce Clarke**. [The algebraic weak factorisation system for delta lenses](#). Proceedings of the Sixth International Conference on Applied Category Theory 2023, *Electronic Proceedings in Theoretical Computer Science*, Vol. 397 (2023).
 5. Emma Chollet, **Bryce Clarke**, Michael Johnson, Maurine Songa, Vincent Wang, and Gioele Zardini. [Limits and colimits in a category of lenses](#). Proceedings of the Fourth International Conference on Applied Category Theory, *Electronic Proceedings in Theoretical Computer Science*, Vol. 372 (2022).
 4. **Bryce Clarke**. [Delta lenses as coalgebras for a comonad](#). STAF 2021 Workshop Proceedings: 9th International Workshop on Bidirectional Transformations, *CEUR Workshop Proceedings*, Vol. 2999 (2021).
 3. **Bryce Clarke**. [A diagrammatic approach to symmetric lenses](#). Proceedings of the 3rd Annual International Applied Category Theory Conference 2020, *Electronic Proceedings in Theoretical Computer Science*, Vol. 333 (2021).
 2. **Bryce Clarke**. [Internal split opfibrations and cofunctors](#). *Theory and Applications of Categories*, Vol. 35 (2020).
 1. **Bryce Clarke**. [Internal lenses as functors and cofunctors](#). Proceedings Applied Category Theory 2019, *Electronic Proceedings in Theoretical Computer Science*, Vol. 323 (2020).
- **Bryce Clarke**. [The Grothendieck construction for delta lenses](#). Preprint (2025).
 - **Bryce Clarke** and Matthew Di Meglio. [An introduction to enriched cofunctors](#). Preprint (2022).

SELECTED RESEARCH TALKS

INTERNATIONAL CONFERENCES AND WORKSHOPS

- 2024 **The algebraic weak factorisation system of twisted coreflections and delta lenses**
International Category Theory Conference (CT2024), University of Santiago de Compostela
- 2024 **The Grothendieck construction for delta lenses**
Distinguished talk, Applied Category Theory Conference (ACT2024), University of Oxford
- 2023 **The algebraic weak factorisation system for delta lenses**
Distinguished talk, Applied Category Theory Conference (ACT2023), University of Maryland
- 2023 **The right-connected completion of a double category**
International Category Theory Conference (CT2023), Université catholique de Louvain
- 2022 **Enriched lenses**
Applied Category Theory Conference (ACT2022), University of Strathclyde
- 2021 **Three approaches to lenses over a base**
International Category Theory Conference (CT20→21), University of Genoa
- 2021 **Delta lenses as coalgebras for a comonad**
9th International Workshop on Bidirectional Transformations (Bx2021), Western Norway University of Applied Sciences
- 2021 **Cofunctors, lenses, and split opfibrations**
Invited talk, Workshop on Polynomial Functors, Topos Institute
- 2020 **Generalising fibrations via multi-valued functions**
64th Annual Meeting of the Australian Mathematical Society (AustMS2020), University of New England
- 2020 **A diagrammatic approach to symmetric lenses**
Applied Category Theory Conference (ACT2020), Massachusetts Institute of Technology
- 2019 **Characterising split opfibrations using lenses**
63rd Annual Meeting of the Australian Mathematical Society (AustMS2019), Monash University
- 2019 **Internal lenses as functors and cofunctors**
Applied Category Theory Conference (ACT2019), University of Oxford
- 2019 **Internal lenses as monad morphisms**
International Category Theory Conference (CT2019), University of Edinburgh

INTERNATIONAL SEMINARS AND COLLOQUIA

- 2024 **Limits and colimits in double categories by example (expository talk)**
Junior Category Theory Seminar, UCLouvain
- 2024 **Reflecting on lenses and split opfibrations**
Category Theory Seminar, University of Edinburgh
- 2023 **The AWFS of twisted coreflections and delta lenses**
Category Theory Seminar, UCLouvain
- 2023 **Lifting twisted coreflections against delta lenses**
Computer Science Theory Seminar, Tallinn University of Technology
- 2023 **Reflections of delta lenses**
Chocola meeting, École normale supérieure de Lyon
- 2022 **Algebraic weak factorisation systems (expository talk)**
Junior Category Theory Seminar, UCLouvain
- 2022 **A double-categorical approach to lenses via algebraic weak factorisation systems**
Topos Institute Colloquium, Topos Institute
- 2022 **Basic concepts of enriched cofunctors**
Masaryk University Algebra Seminar, Masaryk University
- 2022 **Constructing lenses in double categories**
Intercats Seminar, Topos Institute
- 2022 **A general framework for cofunctors**
Computer Science Theory Seminar, Tallinn University of Technology

Entries are hyperlinked to webpages containing additional information.

<i>Reviewer</i>	Applied Categorical Structures, Compositionality, Higher Structures, Theory and Applications of Categories, The Journal of Financial Technology
<i>2024 - 2025</i>	Guest editor: “ Collection honouring Robert Paré for his 80th birthday ” in Applied Categorical Structures
<i>2024</i>	Organiser: The Second Virtual Workshop on Double Categories (online)
<i>2024</i>	Programme committee: ACT2024 , University of Oxford
<i>2023</i>	Programme committee: ACT2023 , University of Maryland
<i>2023</i>	Programme chair and local organiser: Eleventh Symposium on Compositional Structures , École Polytechnique
<i>2022</i>	Organiser: Virtual Double Categories Workshop (online)
<i>2022</i>	Programme committee: ACT2022 , University of Strathclyde
<i>2021</i>	Organiser: Australian Category Seminar , Macquarie University
<i>2021</i>	Scientific committee: Australian Kittens 2021: A Meeting of Early Career Researchers in Category Theory and Homotopy Theory (online)
<i>2021</i>	Organiser: Categories and Companions Symposium (online)
<i>2021</i>	Teaching and Grading: Calculus and Linear Algebra III (S2), Mathematical Concepts for Science (S1), Macquarie University
<i>2020</i>	Mentor & Teaching Assistant: Adjoint School 2020 , Massachusetts Institute of Technology (online)
<i>2019</i>	Participant: Adjoint School 2019 , University of Oxford