

## ACADEMIC AND PROFESSIONAL APPOINTMENTS

- since 2023 Postdoctoral researcher in the [Department of Software Science](#) at Radboud Universiteit.
- 2020 - 2023 Postdoctoral researcher in the [Theoretical Computer Science group](#) at Friedrich-Alexander-Universität Erlangen-Nürnberg.
- 2019 - 2020 Assistant professor at [Polytechnic Institute of Porto](#).
- 2018 - 2019 Researcher at [University of Minho](#) and [INESC TEC](#).
- 2012 - 2018 Researcher at [University of Aveiro](#).

## EDUCATION

- 2014 - 2019 Ph.D. in Mathematics, University of Aveiro.  
Topic: “Kleisli dualities and Vietoris coalgebras” advised by [Dirk Hofmann](#).
- 2010 - 2012 M.Sc. in Mathematics and Applications, University of Aveiro.
- 2007 - 2010 B.Sc. in Mathematics, University of Aveiro.

## PUBLICATIONS

- Pedro Nora, Jurriaan Rot, Lutz Schröder, and Paul Wild. Relational Connectors and Heterogeneous Bisimulations. In *FoSSaCS*, Accepted, 2025.
- Sergey Goncharov, Dirk Hofmann, Pedro Nora, Lutz Schröder, and Paul Wild. Identity-Preserving Lax Extensions and Where to Find Them. In *STACS*, Accepted, 2025.
- Sergey Goncharov, Dirk Hofmann, Pedro Nora, Lutz Schröder, and Paul Wild. A point-free perspective on Lax extensions and Predicate liftings. *Math. Struct. Comput. Sci.*, 34(2):98–127, 2024.
- Sergey Goncharov, Dirk Hofmann, Pedro Nora, Lutz Schröder, and Paul Wild. Kantorovich Functors and Characteristic Logics for Behavioural Distances. In *FoSSaCS*, volume 13992 of *Lecture Notes in Computer Science*, pages 46–67. Springer, 2023.
- Jonas Forster, Sergey Goncharov, Dirk Hofmann, Pedro Nora, Lutz Schröder, and Paul Wild. Quantitative Hennessy-Milner Theorems via Notions of Density. In *CSL*, volume 252 of *LIPICs*, pages 22:1–22:20. Schloss Dagstuhl - Leibniz-Zentrum für Informatik, 2023.
- Dirk Hofmann and Pedro Nora. Duality theory for enriched Priestley spaces. *Journal of Pure and Applied Algebra*, 227(3):107231, 2023.
- Dirk Hofmann and Pedro Nora. Hausdorff Coalgebras. *Applied Categorical Structures*, 28(5):773–806, April 2020.
- Dirk Hofmann, Renato Neves, and Pedro Nora. Limits in categories of Vietoris coalgebras. *Mathematical Structures in Computer Science*, 29(4):552–587, April 2019.
- Dirk Hofmann and Pedro Nora. Enriched Stone-type dualities. *Advances in Mathematics*, 330:307–360, May 2018.
- Dirk Hofmann, Renato Neves, and Pedro Nora. Generating the algebraic theory of  $C(X)$ : the case of partially ordered compact spaces. *Theory and Applications of Categories*, 33(12):276–295, June 2018.
- Dirk Hofmann and Pedro Nora. Dualities for modal algebras from the point of view of triples. *Algebra Universalis*, 73(3):297–320, April 2015.
- Dirk Hofmann and Pedro Nora. Some notes on Esakia spaces. *Textos de Matemática (Série B)*, 46:201–220, 2014.

## PREPRINTS

- Sergey Goncharov, Dirk Hofmann, Pedro Nora, Lutz Schröder, and Paul Wild. Relators and Notions of Simulation Revisited. 2025.

## CONFERENCE TALKS

- Kantorovich Functors and Characteristic Logics for Behavioural Distances. *In FoSSaCS*, 2023.
- Quantitative Hennessy-Milner Theorems via Notions of Density. *In Computer Science Logic*, 2023.
- Quantitative Hennessy-Milner Theorems. *In 26th International Workshop on Algebraic Development Techniques*, 2022.
- Limits in categories of Vietoris coalgebras. *In XI Portuguese Category Seminar*, 2017.
- From Stone to Gelfand with the help of Vietoris. *In 31st Summer Conference on Topology and its Applications*, 2016.
- Stone-type dualities beyond lattice structures I. *In 4th Workshop on Categorical Methods in Non-Abelian Algebra*, 2016.
- Some remarks on spectral relations. *In Final Workshop on project MONDRIAN*, 2013.
- The Vietoris monad. *In 3rd Workshop on project MONDRIAN*, 2013.
- Dualities for modal algebras. *In 21st International Workshop on Algebraic Development Techniques*, 2012.

## SEMINARS

- Maximally permissive notions of bisimulation. *DutchCATs, Radboud Universiteit*, 2023.
- Are identity-preserving lax extensions unique? *Friedrich-Alexander-Universität Erlangen-Nürnberg*, 2022.
- Hennessy-Milner theorems done wrong! *Friedrich-Alexander-Universität Erlangen-Nürnberg*, 2022.
- The Strange Bird or: Is the pointfree way pointless? *Friedrich-Alexander-Universität Erlangen-Nürnberg*, 2021.
- The Strange Bird or: How I learned to stop worrying and love lollipops. *Aveiro*, 2021.
- Hausdorff Coalgebras. *Friedrich-Alexander-Universität Erlangen-Nürnberg*, 2020.
- $H + V$  and everything else. *University of Aveiro*, 2018.
- How I met ultrafilters. *University of Aveiro*, 2017.
- Duality theory beyond dimension zero. *University of Aveiro*, 2017.
- Functional representations of monads in duality theory. *University of Coimbra*, 2015.
- Uniform ordered spaces. *University of Aveiro*, 2014.
- Kripke's duality and applications. *University of Aveiro*, 2013.

## RESEARCH PROJECTS

- 2022 - 2023 CoAx — *Coinduction Meets Algebra for the Axiomatization and Algorithmics of System Equivalences* — supervised by [Stefan Milius](#) and [Lutz Schröder](#).
- 2020 - 2022 HighMoon — *A High Level Language for Programming and Specifying Multi-Effect Algorithms* — supervised by [Sergey Goncharov](#) and [Lutz Schröder](#).
- 2018 - 2019 KLEE — *Coalgebraic Modeling and Analysis for Computational Synthetic Biology* — supervised by [Luís Soares Barbsa](#).
- 2012 - 2013 MONDRIAN — *Foundations for architectural design: Service certification, dynamic reconfiguration and self-adaptability* — supervised by [Dirk Hofmann](#).

## RESEARCH GROUPS

- since 2024 [iCIS](#) — Institute for Computing and Information Sciences.
- 2020 - 2023 [Chair of Computer Science](#) (Theoretical Computer Science).
- since 2020 [CIDMA](#) (Collaborator) — Center for Research & Development in Mathematics and Applications.
- 2018 - 2019 [INESC TEC](#) — Institute for Systems and Computer Engineering, Technology and Science.
- 2014 - 2020 [CIDMA](#) — Center for Research & Development in Mathematics and Applications

## RESEARCH VISITS

- Visiting researcher at [York University](#) — at invitation of [Walter Tholen](#), October 2017.

## GRANTS

- Project KLEE (FCT) (POCI-01-0145-FEDER-030947) research grant awarded by INESC TEC, 2018 ( $\approx 12.000\text{€}$ ).
- Category Theory 2014 conference grant awarded by the University of Cambridge ( $\approx 1.000\text{€}$ ).
- Individual Ph.D. grant awarded by the Portuguese Foundation for Science and Technology ([FCT](#)), 2013 ( $\approx 50.000\text{€}$ ).
- Ph.D. grant awarded by the MAP consurtium ([MAPi](#)) to enroll in their doctoral program in Computer Science, 2013. ( $\approx 50.000\text{€}$ ).
- Project MONDRIAN (FCT) (PTDC/EIA-CCO/108302/200) research grant awarded by CIDMA, 2012 ( $\approx 5.000\text{€}$ ).
- 21st WADT conference grant awarded by the University of Salamanca, 2012 ( $\approx 1.000\text{€}$ ).

## SERVICE

- Member of the organising committee of the main annual conference in [Category Theory in 2015](#).
- Reviewer for the conferences [SBLP 2013](#) and [WADT'22](#).

## TEACHING

- Category theory and coalgebras. [Radboud Universiteit](#), 2024 and 2025.
- Discrete mathematics [Polytechnic Institute of Porto](#), 2019/2020.
- Linear algebra. [Polytechnic Institute of Porto](#), 2019/2020.
- Volunteer tutor for students from low-income families in Aveiro.

## INTERNSHIP SUPERVISIONS

- Wessel de Weijer, [Radboud Universiteit](#), 2024.

## SCHOOLS

- IBM-QuantaLab School on Quantum Computing 2018.
- 22nd European Intensive Course on Complex Analysis, its Generalizations and Applications. Aveiro, 2017.
- Spring School on Logic of Dynamical Systems. Braga, 2014.

## LANGUAGES

- Native Portuguese speaker and fluent in English.