
Research interests

Main Categorical logic, topos theory, duality theory
Others Intuitionistic logic, model theory, realizability, categorical semantics

Education

- Oct 2024 – present PhD in Theoretical Computer Science · IRIF, Université Paris Cité
Thesis: Classifying topoi and intuitionistic model theory through ultracategories and polyadic spaces
Advisor: Sam van Gool
- Sept 2023 – July 2024 Erasmus+ · Universiteit van Amsterdam
- Sept 2022 – July 2024 MSc in Mathematics · Università degli Studi di Milano
Thesis: A category of arrow algebras for modified realizability
Advisors: Benno van den Berg and Silvio Ghilardi
110/110 cum laude
- Sept 2019 – July 2022 BSc in Mathematics · Università degli Studi di Milano
110/110 cum laude

Publications

- 2026 *Toposes with enough points as categories of étale spaces*
Joint work with Sam van Gool and Jérémie Marquès
Journal of Pure and Applied Algebra, 230 (6): 108269
- 2025 *A category of arrow algebras for modified realizability*
Theory and Applications of Categories, 44 (4): 132–180

Preprints

- 2026 *Conceptual completeness for geometric logic via ultraconvergence spaces*
Joint work with Ivan Di Liberti and Lingyuan Ye
Profunctorial algebras
Joint work with Quentin Aristote
- 2025 *Ultracategories via Kan extensions of relative monads*
Joint work with Joshua Wrigley

Teaching

- Fall 2026 Logique · L3 Informatique, *Université Paris Cité*
Exercise classes (French) · Lecturer: Sylvain Schmitz
- Spring 2026 Introduction à la programmation 2 · L1 Informatique, *Université Paris Cité*
Lab classes (French) · Lecturer: Daniela Petrișan
- Fall 2025 Programmation 1 · S5 EIDD, *Université Paris Cité*
Lab classes (French) · Lecturer: Pierre Charbit
- Fall 2024 Programmation 1 · S5 EIDD, *Université Paris Cité*

Lab classes · Lecturer: Pierre Charbit

Spring 2024 Topos theory · MasterMath, *Utrecht University*
Exercise classes · Lecturer: Jaap van Oosten

Community and events

- 2026 – present Curator of the *ItaCa* website
- 2025 – present Organizer of the *Realizability reading group* at IRIF
- 2025 – present Organizer of the *queeRIF* meetings
- Dec 2026 Organizer of the *7th ItaCa Workshop*
- June 2026 Organizer of the *Ultracategories and Stone Duality Workshop*
- 2024 – 2025 Organizer of the *Topos theory reading group* at IRIF

Talks

- 2026 *Conceptual completeness for geometric logic via ultraconvergence spaces*
XXIX Incontro di Logica AILA 2026 · *Rome*
- Conceptual completeness for geometric logic via ultraconvergence spaces*
TACL 2026 · *Krakow*
- Conceptual completeness for geometric logic via ultraconvergence spaces*
Making Categorical Model Theory Accessible · *Masaryk University*
- Toposes with enough points as categories of étale spaces*
Gothenburg Logic Seminar · *Göteborgs Universitet*
- 2-dimensional topologies via profunctorial algebras*
Stockholm Logic Seminar · *Stockholms Universitet*
- Toposes with enough points as categories of étale spaces*
7th Workshop on Formal Topology · *Venice*
- Toposes with enough points as categories of étale spaces*
Séminaires LoCal · *LIPN*
- 2025 *Toposes with enough points as categories of étale spaces*
ItaCa Workshop 2025 · *Università degli Studi di Milano*
- Ultracategories via Kan extensions of relative monads*
ItaCa Fest 2025 · *online*
- Where do ultracategories come from?*
CT2025 · *Masaryk University*
- Arrow algebras, algebraic structures for modified realizability*
Realizability Workshop · *CIRM, Marseille*
- Arrow algebras, algebraic structures for modified realizability*
GT Sémantique · *IRIF*
- A gentle introduction to categorical realizability*
Séminaire des membres non-permanents · *IRIF*
- 2024 *Triposes and toposes via arrow algebras*
Categorical Logic and Higher Categories · *University of Manchester*
- Triposes and toposes through arrow algebras*
Dutch Categories And Types Seminar · *Universiteit Leiden*

Awards and scholarships

- June 2025 AILA 3+2 Award
Best Master's Thesis Award of the Associazione Italiana di Logica e sue Applicazioni
- Oct 2024 Contrat International IDEX
Excellence scholarship for international PhD students at Université Paris Cité

Languages

- Italian native
- English fluent, CEFR C1
- French intermediate

Technical skills

- Programming C, Java, F#
- Other LaTeX, Z3, SPASS