

Timothée Bonnefoi

PhD student at the University of Antwerp

25, Maanstraat
2018 Antwerpen, BELGIUM
☎ (+33) 6 32 78 42 66
✉ timothee@tbonnefoi.com
ID 0000-0003-1636-0812

Current position

- December 2022 - **PhD student in Mathematics at Universiteit Antwerpen (Belgium)**
present under the supervision of **WENDY LOWEN** and **ARNE MERTENS**,
- Defined a formal notion of sheaf toposes in sufficiently nice 2-categories recovering several characterisations generalising Grothendieck toposes.
 - Keywords: Category theory, topos theory, formal category theory, logic, monoidal category, (dependent) type theory.

Research stays

- February - **Internship in homotopy type theory**, *University of San Diego (United States)*,
July 2022 Under the supervision of **MICHEAL SHULMAN**
- September 2021 - **Internship in topos theory**, *Università degli Studi dell'Insubria (Italy)*, Under
the supervision of **OLIVIA CARMELLO**
- January 2022
- April - July 2021 **Remote internship in categorical probability theory**, *FMF, University of Ljubljana (Slovenia)*, Under the supervision of **ALEX SIMPSON**
- May - July 2020 **Remote internship in general relativity**, *Université de Tours (France)*, Under the supervision of **ROMAIN GICQUAUD**
- June - July 2019 **Internship in rough path theory**, *University of Bath (United Kingdom)*, Under the supervision of **HENDRICK WEBER**
- June - July 2018 **Internship in experimental particle physics**, *LAPP Annecy (France)*, under the supervision of **FRANCESCO COSTANZA** and **STÉPHANE JÉZÉQUEL** in the **ATLAS** group

Education

- Fall 2026 **Doctor of Science: Mathematics**, *University of Antwerp*
(Expected)
- 2022 **Diploma of the ENS Lyon (Ecole Normale Supérieure Lyon)**,
◦ *Majored in Mathematics and Physics*, Minored in Computer Science
- 2021 **Master Mathématiques avancées (Advanced mathematics)**
- 2020 **Master 1 Sciences de la Matière (Matter sciences)**
- 2018 **Bachelor Mathématiques fondamentales (Fundamental mathematics)**

Publications

- **A priori bounds for rough differential equations with a non-linear damping term** joint work with **AJAY CHANDRA**, **AUGUSTIN MOINAT**, and **HENDRIK WEBER**, *Journal of Differential Equations*, Volume 318, 2022, Pages 58-93, ISSN 0022-0396, ([doi](#)[preprint](#)).

Teaching experience

Fall 2024/2025 Teaching assistant for the Bachelor 3 class ‘Number Theory’ at the University of Antwerp taught by JULIAN LYCZAK., *Exercise sessions, homework and examination correction*

Spring 2024/2025/2026 Teaching assistant for the Bachelor 2 class ‘Algebra III: Fields’ at the University of Antwerp taught by JULIAN LYCZAK., *Exercise sessions, homework and examination correction*

Fall 2023 Teaching assistant for the Bachelor 3 class ‘Fields and Galois Theory’ at the University of Antwerp taught by KARIM JOHANNES BECHER., *Exercise sessions, homework and examination correction*

Spring 2023 Teaching assistant for the Bachelor 2 class ‘Algebra III: Fields’ at the University of Antwerp taught by IGNACIO BARROS., *Exercise sessions, homework and examination correction*

Conferences

June 2024 Attended the conference CT24 in Santiago de Compostella

2022 - Attending presentations of the Antwerp Algebra seminar
current

June 2022 Attended the HoTT Muri 2022 meeting

Scholarships

2022-2026 Dehousse doctoral scholarship in Mathematics of the University of Antwerp

Additional activities

2022-2026 Doctoral study program of the University of Antwerp

March 2023 Certificate ‘Mind the gap’ for good academic practices

Languages

French Native

Dutch and Intermediate reading level
Spanish Basic speaking level

English CERCL Level C1, CAE (Cambridge English Advanced) certificate

Computer science and programming skills

OS	GNU/Linux: ArchLinux, NixOS (administrator) Windows.	Program- ming languages	Python: Advanced usage.
Tools	L ^A T _E X, Typst, Git		OCaml, SQL, Coq,C/C++, Nix, Emacs Lisp: Basic use
Theory	Courses of the Bachelor 3 & Master 1 in Computer Science of ENS Lyon, in particular Algorithms and Programming		