
Studies

- 2021–2024 (now) **PhD student at LIP (Laboratoire de l'Informatique du Parallélisme)**, advised by Ludovic Henrio and Yannick Zakowski, *Contrat doctoral spécifique normalien – ENS de Lyon, France*
- 2018–2021 **Master's degree in theoretical computer science**, *ENS de Lyon & Université Lyon 1, France*
- 2017–2018 **Bachelor's degree in theoretical computer science**, *ENS de Lyon & Université Lyon 1, France*
- 2017–2018 **Bachelor's degree in mathematics (dual degree)**, *Université Lyon 1, France*

Publications

International journal articles

- 11 January 2023 Nicolas Chappe, Paul He, Ludovic Henrio, Yannick Zakowski and Steve Zdancewic. **Choice Trees: Representing Nondeterministic, Recursive, and Impure Programs in Coq.** *Proc. ACM Program. Lang.* 7, POPL, Article 61 (January 2023), 31 pages.
- 15 July 2021 Nicolas Chappe, Ludovic Henrio, Amaury Maillé, Matthieu Moy and Hadrien Renaud. **An Optimised Flow for Futures: from Theory to Practice.** *The Art, Science, and Engineering of Programming*, vol. 6, no. 1, 2022, article 3.

International conference articles

- October 2023 Eddy Caron and Nicolas Chappe. **FicWebBoard: A Playful and Collaborative Learning Platform Built for All People and All Programming Languages.** *2023 IEEE ASEE Frontiers in Education Conference (FIE)*, Oct 2023

Drafts

Nicolas Chappe, Ludovic Henrio, Yannick Zakowski. **A concurrency model based on monadic interpreters: Executable semantics for a concurrent subset of LLVM IR**

Nicolas Chappe, Paul He, Ludovic Henrio, Eleftherios Ioannidis, Yannick Zakowski and Steve Zdancewic. **Choice Trees: Representing and Reasoning About Nondeterministic, Recursive, and Impure Programs in Coq.**

Program committees

- 2023 POPL'24 Artifact Evaluation Committee

Teaching

- 2023-2024 Teaching assistant for **computer architecture labs** (L2, Université Lyon 1).
- 2022-2023 Teaching assistant for **programming labs** (L3, ENS de Lyon). Various
& 2021-2022 contributions (300+ commits), including 7 new exercise sheets and maintenance of the online platform.
- 2022-2023 Teaching assistant for **compiler labs** (M1, ENS de Lyon). Various
& 2021-2022 contributions (200+ commits) to code and lab subjects.
- 2021-2022 Teaching assistant for **system and network programming labs** (then-new M2 agrégation, ENS de Lyon). 6 lab sheets with code skeletons entirely written.

Other experience

Research internships

- 2021 14-week research internship on compositional code generation for Vellvm in Coq (supervised by Ludovic Henrio and Yannick Zakowski, ENS de Lyon).
- 2020–2021 23-week research internship on the design and evaluation of an algebraic tiling method for stencil loop nests (supervised by Philippe Clauss, Université de Strasbourg).
- 2020 20-week research internship on semantics and implementation of *data-flow explicit futures* (supervised by Ludovic Henrio and Matthieu Moy, ENS de Lyon).
- 2019 11-week research internship on the compilation of climate stencils using LLVM/MLIR (supervised by Tobias Grosser, ETH Zürich, in collaboration with MeteoSwiss and CSCS).
- 2018 7-week research internship on computer-assisted formalization of properties on Markov decision processes (supervised by Samuel Vercaene, INSA Lyon).

Miscellaneous

- 2009–2024 Various personal programming projects, usually in modern C++, Rust, or Python
- 2018–2019 Initiator and co-head of the Symbolibre project (<https://symbolibre.org>), that involved 29 master students in the design of the hardware and software of a graphing calculator.
- 2016–2017 *TIPE* (personal project for a competitive exam) on the design and evaluation of a specialized compression algorithm for C source code.