VICTOR SANNIER

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POSITIONS

2023–2026 (expected) Doctoral Candidate and Teaching Assistant under the supervision of Patrick Baillot (CNRS, France) and co-supervision of Marco Gaboardi (Boston University, MA, USA) at the CRIStAL laboratory in Lille, working on (dependent) graded coeffect type systems for sensitivity analysis and differential privacy protection.

PUBLICATIONS

POPL 2026 Victor Sannier and Patrick Baillot. *Dependent Coeffects for Local Sensitivity Analysis* (2026). In: Proceedings of the ACM on Programming Languages (PACMPL), **10** (POPL). doi:10.1145/3776670.

CSF 2025 Victor Sannier, Patrick Baillot and Marco Gaboardi. *Session Types for the Concurrent Composition of Interactive Differential Privacy* (2025). In: 2025 IEEE 38th Computer Security Foundations Symposium (CSF). doi:10.1109/CSF64896.2025.00040.

FSCD 2024 Victor Sannier and Patrick Baillot. *A Linear Type System for L^p-Metric Sensitivity Analysis* (2024). In: 9th International Conference on Formal Structures for Computation and Deduction (FSCD). doi:10.4230/LIPIcs.FSCD.2024.12
⋆ **Best Paper Award by a Junior Researcher**,

TALKS

SCALP (Formal Structures for Computation and Proofs) is a working group of the IFM (Fundamental Computer Science and Mathematics) French national research group.

SCALP 2025 *Un système de types avec coeffets dépendants pour analyser la sensibilité locale* (2025). In: Journées 2025 du GT Scalp.

SCALP 2024 *Types de session pour la composition concurrente de la confidentialité différentielle interactive* (2024). In: Journées 2024 du GT Scalp. https://www.irif.fr/_media/gt-scalp/journees-2024/scalp24_sannier.pdf.

SCALP 2023 *Un système de types linéaires pour la confidentialité différentielle selon les métriques vectorielles*. In: Journées 2023 du GT Scalp. https://www.irif.fr/_media/gt-scalp/journees-2023/victor-sannier.pdf.

TEACHING AND OUTREACH

During my three years of doctoral studies, I taught logic and computer science at the University of Lille at the bachelors and masters level.

2025–2026	*Logic* (18 h), *System Programming* (18 h), *Algebraic Languages and Syntax Analysis* (18 h)
2024–2025	*Logic* (18 h), *Linear Modeling* (18 h), *Introduction to Computer Security* (18 h)
2023–2024	*Logic* (18 h), *Linear Modeling* (18 h), *Introduction to Computer Security* (18 h)

In November 2024, I gave a one-hour invited talk to undergraduate mathematics and physics students at Lycée Corot in Savigny-sur-Orge, France, introducing the concept of purity of methods in the philosophy of mathematics. See https://cpge-corot.fr/conferences-et-publications/.

COMMUNITY SERVICE

Oct 2024	Member of the Doctoral and Post-doctoral Student Panel during the evaluation of the CRIStAL laboratory by the French High Council for the Evaluation of Research and Higher Education (HCERES).

In addition, I have been contributing to the online encyclopaedia nLab for the last few years, authoring or revising around 30 pages in logic and computer science.

RESEARCH VISITS AND INTERNSHIPS

May–Jul 2025	Research visit at Boston University to work with Marco Gaboardi and Ankush Das on a probabilistic relational system of intuitionistic session types for statically verifying various properties of interactive programs This work is still in progress.
Apr–Jul 2023	Research internship under the supervision of Patrick Baillot (CNRS, France) at the CRIStAL laboratory in Lille, working on linear type systems for sensitivity analysis with respect to L^p metrics (FSCD 2024).
May–Jun 2021	Research internship in philosophy of mathematics under the supervision of Brice Halimi at the SPHère laboratory in Paris, working on the contributions of Michael Detlefsen.

EDUCATION

2022–2023	Master's degree in mathematical logic and foundations of computer science (LMFI) at Paris-Cité University. Coursework: proof theory, model theory, set theory, (higher) category theory, theory of computation, philosophy of mathematics, etc.
2020–2022	Integrated Bachelor's-Master's pure mathematics program (Magistère) at the Orsay Institute of Mathematics, Paris-Saclay University, France. Coursework:

	number theory, abstract algebra, (algebraic) topology, real and complex analysis, etc.
2018–2020	Post-secondary preparatory program in mathematics and physics (CPGE MPSI/MP) at Lycée Mariette, Boulogne-sur-Mer, France.

MISCELLANEOUS

Computer skills	computer programming (Haskell, OCaml, C, Python), interactive theorem proving (Metamath[1], Rocq), digital typesetting[2] (TEX, LATEX, Typst)
Language skills	French (native), English (C1, scored 985/990 at the TOEIC exam), Latin[3]

[1] See https://github.com/vsannier/metamath-databases for some of my Metamath databases.

[2] Since 2023, I have been a member of the French-speaking association of LATEX users (GUTenberg). I have also written an article on a typeface inspired by rustic capitals; see TUGboat 44 (2), 2023, and received a Knuth reward cheque for identifying several typographical errors in Mathematical Writing.

[3] In order to study historical mathematical and philosophical works, I attended Latin classes at the École Normale in Paris and at the University of Lille, and I was part of the Lille Latin Circle (CLIO) from 2023 to 2025.