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Education

- 2012** **High school degree in Science**
First Class Honours.
- 2012 – 2014** **Higher School Preparatory Classes**
Lycée Louis-le-Grand (Paris).
- 2014 – 2018** **Student at the École Normale Supérieure (Paris)**
Ranked 7th in the nationwide entrance examination.
- 2014 – 2015** **Bachelor of Mathematics**
First Class Honours.
- 2015 – 2017** **Master of Mathematics**
First Class Honours. Main courses taken:
- Algebraic number theory;
 - Scheme theory;
 - Analytic number theory.
- 2017 – 2018** **Bachelor of Computer Science**
First Class Honours.

Theses and research internships

- Early 2015** **Undergraduate thesis in Mathematics**
Subject: Representations modulo p of $GL_n(\mathbb{F}_q)$.
- Late 2015** **Thesis required to complete the course in Formal Languages**
Subject: Applications of the Thue-Morse sequence.
- Early 2017** **Master's internship**
Adviser: Yuri Tschinkel (New York University).
Subjects: Exceptional isogenies between reductions of pairs of elliptic curves; Generalised polynomials and rational fractions.
- Mid-2018** **Research internship in Computer Science**
Adviser: Yan Gerard (Université Clermont Auvergne).
Subject: The lonely runner conjecture.
- Late 2018** **Final thesis required by the École Normale Supérieure**
Subject: Arakelov Geometry.

- Late 2018** **Research internship in Mathematics**
Adviser: Jean-Benoît Bost (Université Paris Sud).
Subject: Theta invariants and arithmetic surfaces.
- 2019 – 2023** **Doctorate of Mathematics**
Adviser: Karim Belabas (Institut de Mathématiques de Bordeaux).
Subject: Enumerating integral orbits of prehomogeneous representations.

Computer programming

- Late 2014** **Course in Programming Languages and Compilers**
I wrote a compiler in OCaml for a subset of the Haskell language, producing MIPS code.
- Late 2017** **Course in Digital Systems**
I designed a microprocessor in terms of logic gates, as well as an assembly language for this microprocessor. Then I programmed a digital clock in this assembly language.
- Early 2018** **Course in Systems and Networks**
I wrote a Unix-type operating system in C for the Intel 8086 microprocessor.
- Early 2018** **Course in Semantics and Software Verification**
I wrote a basic static analyser and partially certified it with Coq.

Preprints

- 2022** **Convexity, plurisubharmonicity and the strong maximum modulus principle in Banach spaces**
Submitted.
English version: [arXiv:2210.14087](https://arxiv.org/abs/2210.14087); [HAL:03826538](https://hal.archives-ouvertes.fr/hal-03826538).
French version: [HAL:03826500](https://hal.archives-ouvertes.fr/hal-03826500).
- 2022** **Kempf-Ness covariant and reduction theory**
In preparation.
- 2022** **Effective enumeration of quartic number fields by Bhargava’s method**
In preparation.

Computations

- 2022** **Primitive quartic number fields of absolute discriminant at most 10^9**
Data: [Zenodo:7254825](https://zenodo.org/record/7254825).
Code: [HAL:03879661](https://hal.archives-ouvertes.fr/hal-03879661).

Conferences and talks

- Late 2019** **Conference “Zeta functions”**
Centre International de Rencontres Mathématiques (Marseille).
- Late 2020** **Talk at the Seminar of Algorithmic Number Theory (Bordeaux)**
Title: Optimal coverings of truncated Siegel sets with Euclidean balls.
- Mid-2021** **Conference “Explicit Methods in Number Theory”**
Mathematisches Forschungsinstitut Oberwolfach.
- Late 2022** **Talk at the Seminar of Geometry (Bordeaux)**
Title: Kempf-Ness covariant and reduction theory.
- Late 2022** **Talk at the Seminar of Algorithmic Number Theory (Bordeaux)**
Title: Enumeration of quartic number fields.

Working groups

- 2020 – 2021** **Working group on class field theory**
I organised a working group whose purpose was to learn part of the material in the book “Algebraic Number Theory” edited by Cassels and Fröhlich. The working group met every week. Here are the titles of the talks that I gave:
- Extensions of non-Archimedean local fields;
 - Global fields;
 - Profinite groups and Galois theory;
 - Abelian extensions of local fields.

Teaching experience

- 2020 – 2021** **Teaching assistant for the course “Coloration mathématique”**
First year undergraduate course.
- 2020 – 2021** **Teaching assistant for the course “Outils mathématiques pour la biologie”**
First year undergraduate course.

Computer skills

- Programming languages:** C, OCaml, Unix shell.
Mathematical software: PARI/GP, Magma, Octave.