

Alexandre Roy

Curriculum Vitae

Education

- 2024–Present **PhD student in Mathematics**, Université de Caen Normandie, Caen, Advisor : Jérôme Poineau.
Title : Compactification hybride d'espaces de modules de systèmes dynamiques
- 2023 **Master's Degree in Pure Mathematics**, Université de la Sorbonne, Paris.
Algebraic geometry and number theory
- 2021 **Bachelor's Degree in Mathematics**, Université de la Sorbonne, Paris.
- 2020-2024 **Diplôme de l'ENS**, Ecole Normale Supérieure - Ulm, Paris.
Département de Mathématiques
- 2018-2020 **Classe Préparatoire aux Grandes Ecoles**, Lycée Henri IV, Paris.
- 2018 **Baccalauréat Scientifique**, Lycée Hector Berlioz, Vincennes.

Experience

- 2023–2024 **Research Internship**, Université de Caen Normandie, Caen, Advisor : Jérôme Poineau.
Some readings about the future PhD thesis
- 2023 **Research Internship, Master's thesis, 4 months**, Universität Johann Wolfgang Goethe, Frankfurt, Advisor : Jérôme Poineau.
Title : p -adic and arithmetic dynamics via Berkovich spaces
- 2022 **Research Internship, 5 months**, University of Copenhagen, Copenhagen, Advisors : Jasmin Matz and Morten Riesager.
Title : Compting number fields with fixed degree and bounded discriminant
- 2021 **Mémoire de 1ère année, 2 months**, with Jack Souami, Ecole Normale Supérieure, Paris, Advisor : Arnaud Eteve.
Title : Construction of the exponential function in positive characteristic

Organization

- Dec. 4-6 **Number Theory Team's Retreat**, Université de Caen Normandie, Bayeux, with Denis Simon.
Mini conference between the members of the Number Theory's Team
- 2025-Present **Council member of the LMNO**, Université de Caen Normandie, Caen.
Representative of the PhD students
- May 24-26 **PhD student's Retreat**, Université de Caen Normandie, Bayeux.
2025 Mini conference between the PhD students of Caen
Université de Caen Normandie – Campus 2, S3 111

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Born on 19/01/2000

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Nov. 28-30 **Number Theory Team's Retreat**, Université de Caen Normandie, Bayeux, with
2024 Alexis Lucas.
Mini conference between the members of the Number Theory's Team

Publications

2025 **Action de groupe algébrique sur la compactification hybride**, *preprint*.

Teaching

2025-2026 **Algebra**, *first year mathematics students*, Université de Caen Normandie, linear systems, polynomials, real vector spaces.
50h of mixed courses and exercises sessions

General Mathematics, *first year economic and legal students*, Université de Caen Normandie, 3x3 matrices, graphs.
10h of exercises sessions

2024-2025 **Algebra**, *first year mathematics students*, Université de Caen Normandie, linear systems, polynomials, real vector spaces.
50h of mixed courses and exercises sessions

General Mathematics, *first year economic and legal students*, Université de Caen Normandie, 3x3 matrices, graphs.
10h of exercises sessions

2020-2022 **Mock Oral Exams (colle)**, *first year CPGE students*, Lycée Henri IV, Algebra, analysis and probability.
32h each year

Talk

Nov. 27 2025 **Introduction à la dynamique non-archimédienne**, *Young Researcher Seminar*, LMNO (Caen, France).

Nov. 10 2025 **Introduction à la mesure de Mahler**, *Working group about Lehmer's problem*, LMNO (Caen, France).

Mar. 21 2025 **Definitions of ∞ -categories II**, *Working group about ∞ -categories*, LMNO (Caen, France).

Mar. 7 2025 **Definitions of ∞ -categories I**, *Working group about ∞ -categories*, LMNO (Caen, France).

Nov. 28 2024 **Sur l'article de R. Rumely The minimal resultant locus**, *Number Theory Team Retreat*, (Bayeux, France).

Jun. 20 2024 **Espaces de Berkovich et dynamique**, *Young Researcher Seminar*, LMNO (Caen, France).

Jun. 21 2022 **Counting number fields**, *Presentation of the work done in Copenhagen for the Number Theory Team*, University of Copenhagen (Copenhagen, Denmark).

Training

- 2025-Present **Working Group**, *Autour du problème de Lehmer*, Université de Caen Normandie, Caen (France).
- 2025-Present **Working Group**, *Berkovich Motives*, Université de Caen Normandie, Caen (France).
- Jan. 27-31 2025 **Workshop**, *Model-theoretic methods for non-archimedean geometry*, University of Münster, Münster (Germany).
- Jan. 20-24 2025 **Research School**, *Arithmetic, Algebraic and Analytics Dynamics*, CIRM, Marseille (France).
- 2024-2025 **Working Group**, ∞ -categories, Young researchers working group, Université de Caen Normandie, Caen (France).
- Mar. 4-8 2024 **Spring School**, *Non-archimedean Geometry*, Heildeberg Universität, Heidelberg (Germany).

Languages

- French **Native**
- English **Proficient user** *Conversationally fluent*
- German **Basic/independent user**

Programming

- Latex **proficient user**
- Python **independent user**
- HTML **beginner user**