

# 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 **Bccalauréat 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 Intership, Master's thesis, 4 months**, *Universität Johann Wolfgang Goethe*, Frankfurt, Advisor : Jérôme Poineau.  
Title :  $p$ -adic and arithmetic dynamics via Berkovich spaces
- 2022 **Research Intership, 5 months**, *University of Copenhagen*, Copenhagen, Advisors : Jasmin Matz and Morten Riesager.  
Title : Computing 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.  
2025 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

- 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 Reasearcher 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  $\infty$ -categories II**, *Working group about  $\infty$ -categories*, LMNO (Caen, France).
- Mar. 7 2025 **Definitions of  $\infty$ -categories I**, *Working group about  $\infty$ -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 Reasearcher 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**,  *$\infty$ -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	<b>Native</b>	
English	<b>Proficient user</b>	<i>Conversationally fluent</i>
German	<b>Basic/independent user</b>	

## Programming

Latex	<b>proficient user</b>
Python	<b>independent user</b>
HTLM	<b>beginner user</b>