

Alexis Lucas

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Background

- 2025-2026 **Teaching assistant in Mathematics**, *Université de Caen Normandie (LMNO)*.
- 2022- 2025 **PhD in Mathematics**, *Université de Caen Normandie (LMNO)*, under the supervision of Tuan Ngo Dac and Floric Tavares Ribeiro,
Subject: "Anderson modules and L -series: a P -adic study".
- 2021-2022 **Master degree, Number Theory cursus**, *Université Franche-Comté (Besançon)*, with highest honour.
- 2021 **Obtention of "Agrégation de mathématiques"**, *Option C (Algebra and formal calculus)*, (french teaching exam).
- 2019-2021 **Master degree, Fundamental mathematics cursus**, *Université de Caen Normandie*, with high honour.
- 2016-2019 **Bachelor degree in Mathematics**, *Université de Caen Normandie*, with high honour.
- 2016 **Baccalauréat- General Scientific**, *option Mathematics*, *Lycée Jean Guehenno (Flers)*, with highest honour.

Experiences

- 2022 **Research Internship**, *Master's thesis*, *Université de Caen Normandie (LMNO)*, Supervisors: Tuan Ngo Dac and Floric Tavares Ribeiro,
Subject: "On the Maurischat method for Anderson A -modules".
- 2021 **Research Project**, *Université de Franche-Comté (LMB)*, Supervisor: Hassan Houhkaba
Subject: "Function fields and the Riemann-Roch theorem".

Organization

- 2025-2026 **Organizer of the number theory working group**, "*Autour du problème de Lehmer: de la caractéristique zéro à la caractéristique positive*".
- 2023-2025 **Council member of the LMNO (Caen)**, *Representative of the PhD students*.
- 2023-2024 **Organizer of the PhD students working group (Caen)**, "*An introduction to Elliptic Curve*".
- 11/2024 **Organizer of the LMNO number theory team retreat**, *Bayeux*.
- 11/2023 **Co-Organizer of the LMNO number theory team retreat**, *Bayeux*.

Publications

Purity and almost strict purity of Anderson t -modules, *Comptes Rendus. Mathématique*, 2024, vol 362(G7), 807-812.

Pre-publications

Wieferich primes for Drinfeld modules, with X. Caruso and Q. Gazda, arXiv:2412.11588, 2024.

A P -adic class formula for Anderson t -modules, arXiv:2504.03430, 2025.

Talks (except the Caen young researchers seminar)

- 10/2025 **A P -adic class formula for Drinfeld modules**, *School in number theory EThéN*, CIRM.
- 07/2025 **A P -adic class formula for Anderson t -modules**, *33-èmes Journées arithmétiques*, Luxembourg.
- 06/2025 **A P -adic class formula for Drinfeld modules**, *33-èmes Rencontres arithmétiques de Caen : aspects p -adiques et modulo p* .
- 01/2025 **Wieferich primes and Drinfeld modules**, *Number Theory Conference*, Stellenbosch.
- 11/2024 **Nombres premiers de Wieferich dans les corps de fonctions**, *LMNO number theory team retreat*, Bayeux.
- 11/2023 **Quelques exemples de séries L P -adiques associées à des modules de Drinfeld**, *LMNO number theory team retreat*, Bayeux.

Talks at the Caen young researchers seminar

- 11/2024 **Nombres premiers de Wieferich dans les corps de fonctions.**
- 06/2024 **Modules de Drinfeld et séries L P -adiques.**
- 06/2022 **Diviseurs et théorème de Riemann-Roch**,, *working group "Introduction aux courbes elliptiques" of the Caen young researcher.*
- 06/2022 **Pureté et presque stricte pureté des t -modules d'Anderson.**
 - 10/22 **Introduction aux corps de fonctions et aux séries L associées à certains modules de Drinfeld.**
- 06/2022 **Sur la méthode de Maurischat pour les A -modules d'Anderson.**

Formation

- 10/2025 **School in number theory EThéN**, CIRM.
- 07/2025 **33-èmes Journées arithmétiques**, *Luxembourg*.
- 01/2025 **Number Theory Conference**, *Stellenbosch*.
- 09/2024 **Summer school: A modern introduction to Number Theory**, *Pisa*
- 07/2024 **Arithmetic and Geometric Aspects of Drinfeld Modules, Anderson Motives, and Computational Aspects**, *Palermo*.
- 02/2024 **Modules de Drinfeld: théorie, implémentations et applications à la théorie de l'information**, *Marseille*.
- 09/2023 **Summer school: A la découverte des correspondances de Langlands locales: représentations de groupes p -adiques, théorie du corps de classes et immeubles de Bruhat-Tits**, *Amiens*.
- 07/2023 **32-èmes Journées arithmétiques**, *Nancy*.

Teachings

- 2025–2026 **Advanced Topics in Mathematics , 30 hours**, *First-year mathematics students.*
Algebra 2, 50 hours, *First-year computer science students.*
Logic and Reasoning, 25 hours, *First-year computer science students.*
General Mathematics, 50 hours, *First-year computer science students.*
Discrete Mathematics , 25 hours, *First-year computer science students.*
Mathematics for Economics and Management, 16 hours, *Second-year economics students.*
- 2024–2025 **General mathematics, 50 hours**, *First-year computer science students.*
Mathematics for Economics and Management, 16 hours, *Second-year economics students.*
- 2023–2024 **Mathematics for Economics and Management, 16 hours**, *Second-year economics students.*
Algebra 1, 50 hours, *First-year computer science students.*
- 2022–2023 **Algebra 2, 14 hours**, *First-year computer science students.*
Algebra 1, 50 hours, *First-year computer science students*

Skills

- Languages **French (native), English (professionals skills), Spanish (basics).**
- Programming **LaTeX, Python, Maxima, SageMath.**