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Alexis Lucas

Background

2025-2026 **Teaching assistant ans Research 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 **Agrégation de mathématiques**, (french teaching competitive 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.

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 Ouhkaba
Subject: "Function fields and the Riemann-Roch theorem".

Organization

2025–2026 **Organizer of the number theory working group**, *"Around Lehmer's problem: from zero characteristic to positive characteristic".*

2023–2025 **Coucil member of the LMNO (Caen)**, *Representative of the PhD students.*

2023-2024 **Organizer of the PhD students working group (Caen)**, *"An introduction to Elliptic Curves".*

11/2024 **Organizer of the LMNO number theory team retreat**, *Bayeux.*

11/2023 **Co-Organizer of the LMNO number theory team retreat**, *Bayeux*

Publications

A P-adic class formula for Anderson t-modules, arXiv:2504.03430, 2025, accepted for publication at Journal of the London Mathematical Society.

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.

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 "An Introduction to Elliptic Curves" 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 (professional skills), Spanish (basics).**

Programming **LaTeX, Python, Maxima, SageMath.**