

Léo Poyeton

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Personal informations

Date of birth September 30th 1990
Place of birth Mont-Saint-Aignan, France
Citizenship French

Education

2011–2015 **Student**, *Ecole Normale Supérieure de Lyon*
2011–2012 **Licence**, *Ecole Normale Supérieure de Lyon*
2012–2013 **Master 1**, *Ecole Normale Supérieure de Lyon*
2013–2014 **Master 2**, *Université Joseph Fourier, Grenoble*
2015–2019 **PhD Student**, *Ecole Normale Supérieure de Lyon*

Professional situation

Septembre 2023 – **Associate professor**, *Institut de Mathématiques de Bordeaux*, Université de Bordeaux
March 2023 – **Postdoctoral fellow**, *Dipartimento di Matematica “Tullio Levi-Civita”*, Università degli Studi di Padova, Under the supervision of Nicola Mazzari
August 2023
Jan. 2022 – **Postdoctoral fellow**, *Institut de Mathématiques de Bordeaux*, Under the supervision of Xavier Caruso
Jan. 2023
Sept. 2019 – **Postdoctoral fellow**, *Beijing International Center for Mathematical Research*, Under the supervision of Ruochuan Liu
Dec. 2021
2018–2019 **ATER**, *École Normale Supérieure de Lyon*

Teaching

2023–2024 **Lectures and exercises sessions, Algomath 2**, *University of Bordeaux*
2023–2024 **Exercises sessions on computers, Formal Calculus**, *University of Bordeaux*
2015–2019 **Exercises sessions, Algebra**, *Ecole Normale Supérieure de Lyon*
2018–2019 **Exercises sessions, Complex Analysis**, *Ecole Normale Supérieure de Lyon*
2015–2019 **Oral and written examinations for graduate students preparing the Agregation**, *Ecole Normale Supérieure de Lyon*

- 2 hours lecture on Diophantine equations for graduate students preparing the Agregation.
- 4 hours lecture on the resultant for graduate students preparing the Agregation.
- 4 hours lecture (on Zoom) of introduction to p -adic Hodge theory, for Master students of Peking University.

PhD

Research themes

Locally analytic vectors, p -adic Hodge theory, p -adic Galois representations, (φ, Γ) -modules, (φ, τ) -modules, trianguline representations, p -adic dynamical systems, p -adic differential equations, algorithmic aspects of p -adic Hodge theory.

Publications and prepublications

1. Hui Gao and Léo Poyeton. Locally analytic vectors and overconvergent (φ, τ) -modules. *Journal of the Institute of Mathematics of Jussieu*, pages 1–49, 2019
2. Léo Poyeton. Formal groups and lifts of the field of norms. *Algebra & Number Theory*, 16(2):261–290, 2022
3. Léo Poyeton. (φ, τ) -modules différentiels et représentations potentiellement semi-stables. *Journal de Théorie des Nombres de Bordeaux*, 33(1):139–195, 2021
4. Léo Poyeton. f -analytic B -pairs. *Proceedings of the American Mathematical Society*, 151(06):2399–2415, 2023
5. Aditya Karnatak and Léo Poyeton. Families of Galois representations and (φ, τ) -modules. *To appear, Transactions of the AMS*, 2023
6. Léo Poyeton. Locally analytic vectors and rings of periods. *arXiv preprint arXiv:2202.08075*, 2022
7. Léo Poyeton. A criterion for Lubin’s conjecture. *To appear, Rend. Semin. Mat. Univ. Padova*, 2023

Presentations

- December 2023 **Number Theory Seminar**, *Université de Strasbourg*, Un critère pour la conjecture de Lubin
- November 2023 **Number Theory Seminar**, *Université de Besançon*, Un critère pour la conjecture de Lubin
- March 2022 **Number Theory Seminar**, *Università degli Studi di Padova*, Locally analytic vectors and rings of periods
- February 2022 **Séminaire de théorie des nombres**, *Université Paris 13*, Vecteurs localement analytiques et anneaux de périodes
- January 2022 **Séminaire Représentations des Groupes Réductifs (RGR)**, *Institut de Mathématiques de Marseille*, Admissibilité de (φ, N) -modules filtrés
- December 2022 **Number Theory Seminar**, *Heidelberg University*, Locally analytic vectors and rings of periods
- December 2022 **Séminaire LFANT**, *IMB (Université de Bordeaux)*, Admissibilité de (φ, N) -modules filtrés
- November 2022 **Séminaire de théorie des nombres**, *LMBP (Clermont-Ferrand)*, Admissibilité de (φ, N) -modules filtrés
- October 2022 **Séminaire de théorie des nombres**, *IRMAR (Rennes)*, Vecteurs localement analytiques et anneaux de périodes
- January 2022 **Séminaire de théorie des nombres**, *Laboratoire de Mathématiques Nicolas Oresme (Caen)*, Relèvement du corps des normes
- January 2022 **Séminaire de théorie des nombres**, *Institut de Mathématiques de Bordeaux*, Relèvement du corps des normes
- November 2021 **Number Theory Seminar**, *ENS de Lyon*, Trianguline periods
- May 2020 **Number Theory Seminar**, *ENS de Lyon*, (φ, τ) -modules différentiels et représentations potentiellement semi-stables
- March 2020 **Number Theory Seminar**, *Université de Strasbourg*, Relèvement du corps des normes
- November 2019 **Number Theory Seminar**, *BICMR, Peking University*, Overconvergent (φ, τ) -modules and locally analytic vectors

Novembre 2019 **Number Theory Seminar**, *Tsinghua University*, Lifts of the field of norms and formal groups

Juin 2018 **École jeunes chercheurs en théorie des nombres**, *Besançon*, Relèvement du corps des normes

Juillet 2017 **XXX^e journées arithmétiques**, *Caen*, Relèvement du corps des normes

Other activities

Coorganizer of the seminar of algorithmic number theory of the LFANT team (IMB, Bordeaux) with Razvan Barbulescu from September 2022 to December 2022.

Coorganizer of the seminar of the number theory team (IMB, Bordeaux) with Elena Berardini since September 2023.