# Thomas **Lanard**

CNRS Research Scientist

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## Positions

2022– **CNRS Research Scientist**, Laboratoire de mathématiques de Versailles, Université de Versailles Saint-Quentin, *Versailles, France*

2019–2022 **Postdoctoral Researcher in Mathematics**, University of Vienna, *Vienna, Austria*

## Education

2015–2019 **PhD in Mathematics**, Advisor: Jean-François Dat, *Sorbonne Université, IMJ-PRG, Paris*
Topic: On the depth-zero $\ell$-blocks of $p$-adic groups
Defended on 28 January 2019

2014–2015 **Master's degree (M2) in Mathematics**, École Normale Supérieure, *Lyon*
Topic: Introduction to the theory of zeta and L functions and their applications

2013–2014 **Agrégation in Mathematics**, École Normale Supérieure, *Lyon*
French national competitive examination — rank: 1st

2012–2013 **Master's degree (M1) in Mathematics, ERASMUS**, Imperial College London / École Normale Supérieure de Lyon

2011–2012 **Bachelor's degree (L3) in Mathematics**, École Normale Supérieure, *Lyon*

## Publications

2026 **Depth zero representations over $\overline{\mathbb{Z}}[\frac{1}{p}]$**, with J.-F. Dat, Algebra & Number Theory 20 (2026), no. 7, 1451–1478

2024 **Modulo $\ell$ distinction problems**, with P. Cui and H. Lu, Compositio Mathematica, 160(10), 2285–2321

2023 **Unipotent $\ell$-blocks for simply connected $p$-adic groups**, Algebra & Number Theory 17 (2023), no. 9, 1533–1572

2021 **Equivalence of categories between coefficient systems and systems of idempotents**, Representation Theory 25 (2021), 422–439

2021 **Sur les $\ell$-blocs de niveau zéro des groupes $p$-adiques II**, Ann. Sci. Éc. Norm. Supér. (4) 54 (2021), no. 3, 683–750

2018 **Sur les $\ell$-blocs de niveau zéro des groupes $p$-adiques**, Compositio Mathematica 154 (2018), no. 7

## Preprints

2025 **An algorithm for Aubert-Zelevinsky duality à la Moeglin-Waldspurger**, with A. Mínguez, arXiv:2509.13231

## Conference talks

Jan. 2026 Geometric representation theory and automorphic forms, *Sanya, China*

Nov. 2025 Representation theory of p-adic groups, *Zagreb, Croatia*

Nov. 2023 Journées immeubles et applications, *Poitiers, France*

Sep. 2023 Representations of reductive p-adic groups, L-functions and relative matters : a conference in honor of Guy Henniart, *Amiens, France*

Aug. 2023 Journées d'Etudes 2023 du GDR Théorie de Lie Algébrique et Géométrique, *Rennes, France*

Jul. 2022 AMS-SMF-EMS Joint International Meeting, *Grenoble, France*

May 2022 Paris-London Number Theory Seminar, *London, United Kingdom*

Feb. 2019 Colloquium GDR TLAG, *Poitiers, France*

## Teaching

2021–2022 Linear Algebra, Bachelor, Exercise classes, *University of Vienna*
2019–2021 Algebraic Number Theory, Master, Exercise classes, *University of Vienna*
2020–2021 Linear Algebra and Geometry, Bachelor, Exercise classes, *University of Vienna*
2020–2021 Number Theory, Bachelor, Exercise classes, *University of Vienna*
2019–2020 Modular Forms, Master, Exercise classes, *University of Vienna*
2015–2019 Mathematics (continuing education), L3, Lectures + exercise classes, *Polytech' Paris*
2018–2019 Group Theory, L3, Exercise classes, *Sorbonne Université*
2018–2019 Arithmetic, L2, Exercise classes, *Sorbonne Université*
2015–2018 Fourier Analysis and Distributions, L3, Exercise classes, *Polytech' Paris*

## Supervision

2025– **Nans Bonnel**, PhD (co-supervision with Jean-François Dat)
Jordan decomposition of depth 0 $\ell$-blocks of $p$-adic groups

## Software

**aubert-zelevinsky-duality**, SageMath / Python package for computing the Aubert–Zelevinsky involution for classical groups, *Sage · Python*
**The Langlands Programs**, A website featuring computational tools dedicated to representation theory and the Langlands programme, *Web app*

## Service

2022– **Representation Theory Seminar**, Weekly co-organisation, LMV Versailles
2024– **FMJH**, Steering committee, Fondation Mathématique Jacques Hadamard
2025– **TFJM²**, Organisation of the regional round in Versailles of the Tournoi Français des Jeunes Mathématiciennes et Mathématiciens
2017–2018 **Member of the PhD Students' Committee**

## Languages

**French** native
**English** fluent