

Employment

- 2025–2027 **Research Associate**, *Aix-Marseille Université*, Marseille
Research project RELANTRA led by Raphaël Beuzart-Plessis.
- 2024–2025 **Senior Research Associate**, *University of East Anglia (UEA)*, Norwich
Co-Investigator on the EPSRC grant mentioned below.
- 2021–2023 **Research Associate**, *Imperial College*, London
Postdoctoral researcher, working with David Helm.
- 2019–2021 **Senior Research Associate**, *UEA*, Norwich
Postdoctoral researcher, working with Shaun Stevens.

Educational background

- 2015–2019 **PhD**, *Sorbonne Université (formerly UPMC)*, ℓ -modular theta correspondence
Done under the supervision of Alberto Mínguez. Additional tasks including science mediation the first year, and teaching the years after. Financed by the doctoral school of Paris.
- 2013–2015 **Master**, *UPMC*, Fundamental mathematics
Held in September 2015. Master thesis done under the supervision of Benoît Stroh.
- Master 2nd year LOPHISS**, *Paris Diderot*, Logic, Philosophy, History, Sociology of Sciences
In parallel to the master of mathematics.
- 2012–2013 **Aggregation of mathematics**, *ENS Cachan*
Competitive examination to become teacher. Accepted and ranked 82nd.

Research grant

- 2022 **EPSRC Research Grant EP/V061739/1**, *Local theta correspondence: a new study through the theories of types and l -modular representations*, Funded Value: £417 076
Research Co-Investigator on this grant, Shaun Stevens being the Principal Investigator of this project. It includes the organisation of a conference and a workshop, as well as the creation of an online platform about the theta correspondence.

Dissertation

- 2019 **Doctoral thesis: ℓ -modular theta correspondence**
Done under the supervision of Alberto Mínguez. Defended in October 2019.

Memoirs and research trainings

- 2015 **Master's Thesis: number theory**, *UPMC*, Paris
Thesis done under the supervision of Benoît Stroh studying a paper of Henri Darmon about the modularity of fibres of certain rigid local systems.
- 2012 **Research training: theoretical physics**, *IPhT*, CEA Saclay
I worked on quantum chaos under the advisement of Stéphane Nonnenmacher.
- 2011 **Research training: shape optimisation**, *CMLA*, ENS Cachan
Initiation to research in mathematics with a part time work over 6 months supervised by Alain Trounev.

Research papers

- 2026 **Modular Weil representation and compatibility of cuspidals with congruences**, submitted
Modular Weil representation, metaplectic group and compatibility of the theta correspondence to congruences for cuspidal representation.
- 2026 **On the rationality of the Weil Representation and the local theta correspondence**, Canadian Journal of Mathematics, First view, Published online (2026), 1-31
Realisation of the Weil representation and the theta correspondence over a number field.
- 2025 **The MVW involution of the metaplectic group**, with *Shuichiro Takeda*, submitted
Full proof of the existence of the MVW dualising involution of the metaplectic group.
- 2025 **The universal Harish-Chandra j -function**, with *Gil Moss*, International Mathematics Research Notices, Vol. 2026, Iss. 14, July 2026, rnag120
Construction of the Harish-Chandra j -function and intertwining operators in families.
- 2025 **The ℓ -modular theta correspondence**, submitted
Continuation of the second half of my PhD thesis on the modular theta correspondence.
- 2023 **Towards a theta correspondence in families for type II dual pairs**, with *Gil Moss*, to appear at American Journal of Mathematics
Formulating and proving a theta correspondence in families for type II dual pairs.
- 2022 **Whittaker functionals and contragredient in characteristic not p** , with *Nadir Matringe*, Mathematical Research Letters, Vol. 31 (2024), No. 4, 1153-1168
Generalisation to ℓ -modular representations of the work of François Rodier on unicity of Whittaker models for reductive groups over a p -adic field.
- 2021 **Universal Weil Module**, Pacific Journal of Mathematics, Vol. 323 (2023), No. 2, 359-399
Looking at Weil modules in families with coefficients over minimal rings.
- 2020 **Correspondance thème locale ℓ -modulaire I : groupe métaplectique, représentation de Weil et Θ -lift**, replaced by the paper *Modular Weil representation* above
Generalising the first part of my thesis work, with some improvements involving extension of scalars for coefficient fields.

Research in preparation

- 2026 **ℓ -modular local theta correspondences between cuspidal representations**, with *Jia-Jun Ma, Hung Yean Loke et Shaun Stevens*
Explicit theta correspondence between cuspidal representations via type theory.
- 2026 **Integrality of the local transfer and converse theorems for the j -function**, with *Gil Moss*
Integrality of the functorial transfer from classical groups to general linear groups.
- 2026 **Symmetry breaking operators for p -adic groups**, with *Nadir Matringe*
Branching laws in the case of a Galois involution, generalising the work of Ciobotaru-Frahm.

Talks

- Jun. 2026 **Autour de la correspondance de Langlands sauvagement ramifiée et de la correspondance thème**, *Séminaire Représentations des Groupes Réductifs*, Institut de Mathématiques de Marseille, Université Aix-Marseille
- May 2026 **The MVW involution of the metaplectic group**, *This is What I Do*, Representation Theory & Noncommutative Geometry (RTNCG network), AIM Research Community
- Mar. 2026 **Sur la rationalité de la représentation de Weil**, *Séminaire Arithmétique*, Laboratoire Paul Painlevé, Université de Lille
- Nov. 2025 **The universal Harish-Chandra j -function**, *Workshop Representation theory of p -adic groups*, University of Zagreb
- Oct. 2025 **The universal Harish-Chandra j -function**, *Research Seminar*, University of Maine

- Oct. 2025 **The universal Harish-Chandra j -function**, *Representation Theory and Number Theory Seminar*, University of Utah
- Oct. 2025 **The universal Harish-Chandra j -function**, *Number Theory Seminar*, UCLA, Los Angeles
- Oct. 2025 **The universal Harish-Chandra j -function**, *p -adic afternoon*, The University of British Columbia, Vancouver
- Sept. 2025 **ℓ -modular local theta correspondence**, *Seminar of Algebra and Algebraic Geometry*, ShanghaiTech University
- Mar. 2025 **ℓ -modular local theta correspondence**, *Representation Theory and Non Commutative Geometry theta correspondence week*, Trimestre thématique à l'Institut Henri Poincaré, Paris
- Sept. 2024 **ℓ -modular local theta correspondence**, *Conference in honor of Colin Bushnell Representations of p -adic Groups and the Langlands Correspondence*, King's College, Londres
- Mar. 2024 **En direction d'une correspondance θ en familles pour les paires duales de type II**, "Algebra Network" meeting, CIRM, Université Aix-Marseille
- Jan. 2024 **Towards a theta correspondence in families for type II dual pairs**, *Research Seminar*, Department of Mathematics and Statistics, University of Maine
- Jan. 2024 **Towards a theta correspondence in families for type II dual pairs**, *Rep. Theory and Number Theory Seminar*, Department of Mathematics, University of Utah
- Jan. 2024 **Towards a theta correspondence in families for type II dual pairs**, *AMS Special Session on Theta Correspondence*, Joint Mathematics Meetings, San Francisco
- Nov. 2023 **En direction d'une correspondance θ en familles pour les paires duales de type II**, *Séminaire d'Algèbre et Géométrie*, Laboratoire de mathématique de Versailles, Université de Versailles Saint-Quentin-en-Yvelines
- Jun. 2023 **Towards a theta correspondence in families for type II dual pairs**, *Pure Maths Seminar*, University of East Anglia, Norwich
- Mar. 2023 **Towards a theta correspondence in families for type II dual pairs**, *Number Theory Seminar*, School of Mathematics, The University of Sheffield
- Feb. 2023 **En direction d'une correspondance θ en familles pour les paires duales de type II**, *Séminaire Représentations des Groupes Réductifs*, Institut de Mathématiques de Marseille, Université Aix-Marseille
- Jun. 2022 **En direction d'une correspondance θ en familles pour les paires duales de type II**, *Séminaire Arithmétique*, Laboratoire Paul Painlevé, Université de Lille
- Jun. 2022 **Towards a theta correspondence in families for type II dual pairs**, *Representation Theory and Automorphic Forms seminar*, University of Vienna
- Jun. 2022 **Towards a theta correspondence in families for type II dual pairs**, *London number theory seminar*, King's College London
- Jun. 2022 **Lecture series: Towards a theta correspondence in families for type II dual pairs**, *Local team seminar*, Imperial College London
- Apr. 2022 **Towards a theta correspondence in families for type II dual pairs**, *Workshop: minimal representations and theta correspondence*, Erwin Schrödinger International Institute for Mathematical Physics, Vienna
- Feb. 2022 **Correspondance θ en familles pour les paires de type II**, *Séminaire Groupes, Algèbre et Géométrie*, Laboratoire de Math. et Applications, Université de Poitiers
- Mar. 2021 **Towards an integral local theta correspondence**, *Representation Theory and Number Theory Seminar*, Department of Mathematics, University of Utah
- Feb. 2021 **Towards an integral local theta correspondence**, *Number Theory Seminar*, Department of Pure Mathematics and Mathematical Statistics, University of Cambridge
- Nov. 2019 **ℓ -modular theta correspondence**, *Pure Maths Seminar*, University of East Anglia, Norwich

- Jul. 2019 **Correspondance θ - ℓ -modulaire**, *Séminaire d'Algèbre et Géométrie*, Laboratoire de mathématique de Versailles, Université de Versailles Saint-Quentin-en-Yvelines
- Jun. 2019 **Correspondance θ - ℓ -modulaire**, *Séminaire groupes réductifs et formes automorphes*, Séminaire d'équipe de l'IMJ-PRG, Sorbonne Université
- Mar. 2019 **ℓ -modular θ correspondence**, *Number theory seminar*, Faculty of mathematics, University of Vienna

Organisation

- Jul. 2025 **Summer school on the θ correspondence**, UEA, Norwich
Summer school for PhD students, organised with Shaun Stevens and financed by the Research Schools programme of the London Mathematical Society. Link on my webpage.
- Sept. 2024 **The 24 hours of θ** , *King's College*, London
Hybrid conference running over a full day with 3 consecutive 8-hour slots. Started in Singapore, continued in London and finished in the United States. Organised together with Petar Bakić et Edmund Karasiewicz. Link on my webpage.

Teaching duties and outreach

- Jul. 2025 **Summer School**, *Prishtina International Summer University 2025*, Automata Theory: Formal Languages, Algebraic Structures and Number Theory, with Islam Foniqi, Prishtina (Kosovo)
- 2022–2023 **Lecturing**, *Masters of Science*, Imperial College, London
Elliptic Curves course for masters students.
- 2022–2023 **Tutoring**, *Year 1*, Imperial College, London
Running two Year 1 tutorial groups over the whole year.
- 2020–2021 **Lecturing**, *Algebra II*, UEA, Norwich
Ring theory for second year students.
- 2018–2019 **Tutoring**, *Sorbonne Université (SU)*, Paris
I did oral examinations in differential calculus for last year bachelor students, as well as tutorials in algebra.
- Dec. 2018 **Lecturing**, *Topology and differential calculus*, African Institute for Mathematical Sciences (AIMS), M'bour (Senegal)
Thanks to a joint program between SU and the Senegal-based centre of AIMS, I had the opportunity to give a 15-lecture master's course in Africa as part of my teaching duties.
- 2017–2018 **Tutoring**, *Algebra: group theory*, SU, Paris
Tutorials as well as oral examinations for final year bachelor students.
- 2016–2017 **Tutoring**, UPMC (now SU), Paris
I did the tutorials for second year bachelor students in "Sequences, series and integrals" as well as lecture-tutorials on the software Mathematica for first years students.
- 2015–2016 **Science mediator**, Cité des Sciences, Paris
My doctoral contract allowed me to have this experience in one of the big science museum of Paris, and even of France. It consisted in helping prepare scientific outreach activities and to present them, in front of schools as well as in public.

Mathematical life

- 2020–2021 **Pure Maths Seminar**, UEA
Organised in collaboration with V. Aslanyan and K. Hristova.
- 2016–2018 **Séminaire des thésards**, IMJ-PRG
This seminar was about general mathematics, and giving an opportunity to PhD students to have a first talk in a kindly atmosphere. I was organising it with other PhD students.
- 2016–2018 **Rencontres masters-doctorants**, IMJ-PRG
Bi-annual reunion financed by the university and the IMJ-PRG, I co-initiated. Friendly moment for PhD and master students to meet and chat, involving short research talks followed up with a drink.

2016–2017 **Séminaire Aromaths**, *UPMC*, Paris

I was part of the organising team of this seminar dedicated to bachelor students. I help them as much as I can today, as I have got other responsibilities.

Language skills

French Mother tongue

English Fluent

Spanish Good level

Chinese Studied in high school, succeeding in the final oral examination