

Justin Trias

Curriculum vitæ

School of Mathematics
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Employment

- Sep. 2021– **Research Associate**, *Imperial College*, London.
Postdoctoral researcher, working with David Helm.
- 2019–2021 **Senior Research Associate**, *University of East Anglia (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.

Dissertation

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

Research

- 2021 **ℓ -modular local theta correspondence III: commutative dual pairs in the strong-banal setting**, *In preparation*.
Research paper coming from the last part of my thesis work.
- 2021 **ℓ -modular local theta correspondence II: filtrations for dual pairs of type I and cuspidal support**, *In preparation*.
Research paper coming from the main second part of my thesis.
- 2021 **Universal Weil Module**, *arXiv:2103.04840*, 36 pages.
Looking at Weil modules in families with coefficients over minimal rings.
- 2020 **Correspondance thêta locale ℓ -modulaire I : groupe métaplectique, représentation de Weil et Θ -lift**, *arXiv:2009.11561*, 91 pages, submitted.
Generalising the first part of my thesis work, with some improvements involving changing coefficients fields.

Talks

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

Teaching duties and outreach

- Spring 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