

Contact Information

Mathematisches Institut der Universität Bonn
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Research interests

Number theory, automorphic forms and representations, L-functions.

Employment

present **Mathematisches Institut der Universität Bonn**, Bonn, Germany, 2023–2026.
Postdoctoral researcher.

2022–2023 **QMUL**, London, United Kingdom.
Postdoctoral research associate.

Education

2018–2022 **QMUL**, London, United Kingdom.
PhD under the direction of ABHISHEK SAHA. Thesis title : *Whittaker coefficients of automorphic forms and applications to analytic number theory*.

2016–2017 **Université de Bordeaux**, Bordeaux, France.
Master's degree in Mathematics, speciality in Algebra, Geometry and Number Theory.

2014–2015 **École Normale Supérieure de Cachan**, Cachan, France.
Master 1 in Mathematics, mention **Very Good**.
Master 1 in theoretical Computer Science, mention **Very Good**.

2013–2014 **École Normale Supérieure de Cachan**, Cachan, France.
Bachelor's degree in Mathematics, mention **Good**.
Bachelor's degree in theoretical Computer Science, mention **Good**.

Preprints and Publications

2025 **An effective version of the Kuznetsov trace formula for $\mathrm{GSp}(4)$** , preprint, arxiv.org/abs/2502.17234, (with Didier Lesesvre and Siu Hang Man).

2024 **A weighted vertical Sato-Tate law for Maaß forms on GSp_4** , preprint, arxiv.org/abs/2409.06027.

2025 **Moments of symmetric square L-functions on $\mathrm{GL}(3)$** , accepted in *Proc. Lond. Math. Soc.*, arxiv.org/abs/2405.10827, (with Valentin Blomer).

2025 **Bounds on Fourier coefficients and global sup-norms for Siegel cusp forms of degree 2**, accepted in *J. London Math. Soc.*, arxiv.org/abs/2307.07376, (with Abhishek Saha and Jolanta Marzec-Ballesteros).

2020 **Optimal sup norm bounds for newforms on GL_2 with maximally ramified central character**, *Forum Mathematicum*, 33 (2021), no.1, 1–16.

2019 **A uniform estimate for the density of rational points on quadrics**, *J. Théor. Nombres Bordeaux*, 31 (2019), no. 1, 243–253.

Previous research work and unpublished scientific writings

- 2018 **Bristol University, Bristol, United Kingdom.**
Five months research project with TIM BROWNING : counting rational points, leading to my *J. Théor. Nombres Bordeaux* paper.
- 2017 **ETH Zürich, Zürich, Switzerland.**
Five months research project with EMMANUEL KOWALSKI : sieving methods for automorphic forms on GL_3 , unpublished internship report.
- 2017 **Université de Bordeaux, Bordeaux, France.**
Master's thesis under the direction of FLORENT JOUVE in Number Theory : asymptotic distribution of Galois groups of integral polynomials.
- 2015 **Helsinki University, Helsinki, Finland.**
Research internship with JOUKO VÄÄNÄNEN in second order Logic and Set Theory : undecidability in ZFC of second order logic's categoricity, unpublished research article.
- 2014 **École Normale Supérieure de Cachan, Cachan, France.**
Bachelor's thesis under the direction of JEAN-MICHEL MOREL and CARLO DE FRANCHIS in image processing : stereo matching algorithm in C, unpublished research article.

Conference Talks

- June 2023 **Arithmetic Statistics in Automorphic Forms and Analytic Number Theory, Lausanne, Switzerland, (contributed talk).**
- September 2022 **Automorphic Forms Conference, Budapest, Hungary (contributed talk).**
- March 2022 **Young Scholars in the Analytic Theory of Numbers and Automorphic Forms, Bonn, Germany.**
- May 2019 **Colloque Inter'Actions en Mathématiques 2019, Talence, France.**
- April 2019 **Analytic Aspects of Automorphic Forms, Lille, France.**

Invited talks at research seminars

- April 2023 **Séminaire Arithmétique, Lille, France.**
- March 2023 **London Number Theory Seminar, London, United Kingdom.**
- December 2022 **Methusalem Junior Seminar, Leuven, Belgium.**
- August 2022 **Number theory seminar, Copenhagen, Denmark.**
- May 2022 **Egham-Reading-London Arithmetic Statistics Seminar VI, London, United Kingdom.**
- May 2021 **Linfoot seminar, Bristol, United Kingdom.**

Teaching Experience

- 2020–2021 **QMUL.**
Semester 1 Teaching Assistant for *Introduction to Probabilities*
King's College London.
Semester 1 Tutor for *Introduction to Number Theory*
- 2019–2020 **QMUL.**
Semester 2 Teaching Assistant for *Introduction to Differential Geometry.*
Teaching Assistant for *Introduction to Algebra.*
- Semester 1 Teaching Assistant for *Calculus 1.*
- 2018–2019 **QMUL.**
Semester 2 Demonstrator for *Complex Variable.*

Administration and Service

Royal Institution Speaker

AMS Reviewer