

CONTACT INFORMATION	School of Mathematics and Statistics University of Glasgow University Place Glasgow G12 8QQ United Kingdom robin.bartlett.math@gmail.com https://robin-bartlett.github.io/
RESEARCH INTERESTS	Algebraic number theory, the p -adic Langlands program, and links to geometric representation theory. I am particularly interested in combining tools from integral p -adic Hodge theory and algebraic geometry to study of moduli spaces of p -adic Galois representations.
EMPLOYMENT	University of Glasgow Rankin-Sneddon fellow, since 2023 University of Münster Postdoctoral researcher, 2020-2023 Max Planck Institute for Mathematics (Bonn) Postdoctoral researcher, 2018-2020
EDUCATION	Kings College London and the London School of Geometry and Number Theory Ph.D. in Mathematics, 01/12/2018 Thesis: <i>On the reduction modulo p of crystalline representations</i> <ul style="list-style-type: none">• Supervised by Fred Diamond. University of Warwick MMath 2010-2014 <ul style="list-style-type: none">• Awarded first class degree.
PAPERS	<ol style="list-style-type: none">1. <i>Hodge types degenerate according to the strong linkage principle</i> In preparation 20242. <i>Irreducibility of some crystalline loci with irregular Hodge–Tate weights</i> Proc. Amer. Math. Soc. 153 (2025), 15-303. <i>Cycles relations in the affine grassmannian and applications to Breuil–Mézard for G-crystalline representations</i> To appear Compositio Mathematica4. <i>Explicit Serre weights for GL_2</i> (with Misja Steinmetz) Submitted 2022.5. <i>Degenerating products of flag varieties and applications to the Breuil–Mézard conjecture</i> Selecta. Math. 30, 17 (2024)6. <i>Potential diagonalisability of pseudo-Barsotti–Tate representations</i> Journal de Théorie des Nombres de Bordeaux, Volume 35 (2023) no. 2, pp. 335-371.7. <i>On the irreducible components of some crystalline deformation rings</i> Forum of Mathematics Sigma, Volume 8, 2020, e22.

8. *Potentially diagonalisable crystalline lifts with controlled Hodge–Tate weights*
Documenta Mathematica, 26, 795–827, 2021.
9. *Inertial and Hodge–Tate weights of crystalline representations*
Mathematische Annalen, 376(1), 645–681.

SERVICES

- Organised the Summer semester 2022 Oberseminar (study group) in Münster on Modularity lifting theorems.
- Co-organised (with Eugen Hellmann) Münster number theory seminar (Summer semester 2021).
- Co-founded London junior number theory seminar (2016–2017)
- Referee for journals including J. Reine Angew. Math., Algebra and Number theory, Forum of Math Pi, Ann. Sci. de l'ENS, J. de l'Ecole Poly. Math, J. Théor. Nombres Bordeaux, Documenta Mathematica, and Math. Res. Lett.

GRANTS AND AWARDS

- | | |
|------|--|
| 2024 | Awarded funding for 1 month visit to the Max Planck Institute for mathematics, Bonn. Value: EU 2500. |
| 2016 | Awarded funding by King's College London Global research grant to support a visit to Professor Frank Calegari and Professor Matthew Emerton at University of Chicago. Value: GBP 2000. |

CONFERENCE TALKS

- Journées Arithmétiques 2023, Nancy (July 2023)
- Banff International Research Station, Modularity and Moduli Spaces, CMO Oaxaca (Oct. 2019)

SEMINAR TALKS

- University of Bath, Number theory seminar (April 2025)
- University of Warwick, Number theory Seminar (Jan. 2025)
- University of Edinburgh, Algebra seminar (Jan. 2024)
- University of Cambridge, Number theory seminar (Jan. 2024)
- Jussieu, Séminaire Groupes Réductifs et Formes Automorphes (Nov. 2023)
- University of Glasgow, Algebra and Number theory seminar (Nov. 2023)
- Queen Mary Number theory seminar (July 2023)
- University of Münster (Sep. 2022)
- SUSTech, China (Mar. 2022)
- Université Paris 13 (Feb. 2022)
- University of Chicago Number theory seminar (Oct. 2021)
- Queen Mary University London (Mar. 2021)
- University of Arizona (Feb. 2021)
- University of Münster (Nov. 2020)
- University of Rennes (cancelled) (Jan. 2020)
- University of Leiden (Dec. 2019)
- Essen Arithmetic Geometry Research Seminar (Apr. 2019)
- Max Planck Institute for Mathematics, Bonn, Number Theory Seminar (Apr. 2019)
- Max Planck Institute for Mathematics, Bonn, Oberseminar (Nov. 2018)
- University of Purdue Automorphic Forms and Representation Theory Seminar (May 2018)
- University of Chicago Number Theory Seminar (May 2018)
- Junior London Number Theory seminar (Jan. 2018)
- Junior London Number Theory seminar (Oct. 2016)
- London Number Theory Study groups (2015 - 2018, at least one talk a term)

TEACHING EXPERIENCE

University of Glasgow

Calculus side of Maths 1C, Winter term 2024–25

- Lecturer for first year undergraduate course aimed at non-mathematics students.

Calculus side of Maths 1, Winter term 2023-24

- Lecturer for first year undergraduate mathematics course.

Further complex analysis, Winter term 2023-24

- Course head for fourth year undergraduate course on complex analysis.

University of Münster

Masters course: Deformation theory of Galois representations (Winter semester 2021/22)

- Course aimed at masters and Phd students.

King's College London Mathematics School

Class tutor (2017-2018)

- Taught two groups of 16-17 year old students mathematical problem solving classes.

REFERENCES

Prof. Fred Diamond
Department of Mathematics
King's College London
London
WC2R 2LS
United Kingdom
`fred.diamond@kcl.ac.uk`

Prof. Toby Gee
Department of Mathematics
Imperial College London
London
SW7 2AZ
United Kingdom
`toby.gee@imperial.ac.uk`

Dr. Shu Sasaki
Department of Mathematics
Queen Mary University of London
London
E1 4NS
United Kingdom
`s.sasaki@qmul.ac.uk`

LANGUAGES

English (native), French (reading), German (intermediate).