Dr. Chris Williams

christopher.d.williams@warwick.ac.uk

EMPLOYMENT

- **University of Warwick**   **2019–present**
  - EPSRC postdoctoral fellow
  - Grant title: *Constructions and properties of p-adic L-functions for* $\mathrm{GL}(n)$
- **Imperial College London**   **2016–2019**
  - Heilbronn Research Fellow

QUALIFICATIONS

- **University of Warwick**   **2012–2016**
  - PhD in Pure Mathematics (viva: Aug 2016)
  - Thesis title: *Overconvergent modular symbols over number fields*
- **Trinity College, Cambridge**   **2008–2012**
  - MMath (Distinction)
  - BA (Hons) in Mathematics (Double First)

RESEARCH PAPERS

8. *Stark–Heegner cycles attached to Bianchi modular forms* (with G. Venkat). Preprint (arXiv: 1910.14581).

7. *Overconvergent Hilbert modular forms via perfectoid modular varieties* (with C. Birkbeck and B. Heuer). Submitted (arXiv: 1902.03985).

6. *Families of Bianchi modular symbols: critical base-change p-adic L-functions and p-adic Artin formalism* (with D. Barrera Salazar)
   Appendix by C. Wang-Erickson. Submitted (arXiv: 1808.09750).

5. *P-adic Asai L-functions of Bianchi modular forms* (with D. Loeffler)
   Submitted (arXiv: 1802.08207).

4. *Exceptional zeros and $\mathcal{L}$-invariants of Bianchi modular forms* (with D. Barrera Salazar). Trans. Amer. Math. Soc. 372 (2019), no.1, pp.1–34.

3. *P-adic L-functions for* GL_2 (with D. Barrera Salazar)
   Canad. J. Math. 71 (2019), no.5, pp.1019–1059.

2. *Lifting non-ordinary cohomology classes for* SL_3
   Publ. Mat. 62 (2018), no.2, pp.651–675.

1. *P-adic L-functions of Bianchi modular forms*
   Proc. Lond. Math. Soc. 114 (2017), no.4, pp.614–656.

FUNDING

- EPSRC Postdoctoral Fellowship   2019–2022
  (Grant no. EP/T001615/1; value £310,002)
- Heilbronn focused project grant (for *Families of Shalika models and p-adic L-functions*, £800)   Feb 2019
- Oberwolfach Research in Pairs visit (for *The fine Selmer group and computing Bianchi p-adic L-functions*)   Aug 2018

	• Heilbronn Fellowship (all employment costs and research grant)	2016–2019
	• EPSRC DTG Doctoral grant (stipend and research grant)	2012–2016
PRIZES	• Doctoral thesis prize (top Warwick Mathematics thesis of the year)	2016
	• Heilbronn prize (for excellent performance in examinations)	2011
	• Trinity College Senior Scholarship	2010–2012

TEACHING EXPERIENCE

- **Lecturer, Imperial College London**   Nov – Dec 2017
  - Wrote and lectured a graduate course titled *An introduction to p-adic L-functions* jointly with Joaquín Rodrigues. Also wrote lecture notes and exercise sheets for assessment.
  - The course received over 90% student satisfaction.

- **Teaching Assistant, Warwick**
  Ran a weekly support class, whilst also marking all assessed work.
  - Modular Forms   Oct 2014 – Jan 2015
  - Further Representation Theory   Jan – Mar 2014
  - Modular Forms   Oct 2013 – Jan 2014

SUPERVISION

- **Project supervision**
  Supervised Master's theses for the following students:
  - E. Cross (Warwick)   Oct 2019 – ongoing
  - B. Zurbuchen (Imperial/ETH Zurich)   Nov 2018 – Sept 2019
  - J. Laurens (Imperial/École Polytechnique)   Apr – Aug 2018

  Also supervised two undergraduate projects.

- **Undergraduate supervisor, Warwick**   Oct 2012 – Jun 2013
  Supervised ten first year undergraduates in all major modules, meeting twice a week during term time; responsible for the marking of their assessed work.

INVITED TALKS

- *Overconvergent cohomology and p-adic L-functions for* $\mathrm{GL}(2n)$
  - Days in number theory workshop, Regensburg   Apr 2020
  - Warwick number theory seminar   Nov 2019
  - Automorphic p-adic L-functions and regulators, Lille   Oct 2019
    (invited to give joint minicourse of lectures)
  - p-adic modular forms workshop, Sheffield   Jul 2019
  - Barcelona number theory seminar   Apr 2019

- *Factorisation of base-change Bianchi p-adic L-functions*
  - P-adic families workshop, Cardedeu   Apr 2018

- *P-adic Asai L-functions of Bianchi modular forms*
  - Oxford number theory seminar   Feb 2019
  - Lille arithmetic seminar   Oct 2018
  - Sheffield number theory seminar   Feb 2018
  - Heidelberg geometry and arithmetic seminar   Jan 2018
  - London number theory seminar   Nov 2017

	– Warwick number theory seminar	May 2017
	– Barcelona number theory seminar	May 2017

- *P-adic L-functions for* GL_2

	– Automorphic forms workshop, King's College London	Sept 2016
	– *P*-adic *L*-functions workshop, Cambridge	Jun 2016
	– Warwick number theory seminar	Jun 2016

- *Overconvergent modular symbols over imaginary quadratic fields*

	– Bristol Heilbronn seminar	Nov 2015
	– Sheffield number theory seminar	Oct 2014
	– London number theory seminar	Jan 2014

- *Other invited workshops*

	– Seminari de teoria de nombres, Barcelona	Jan 2017
	– The arithmetic of Euler systems, Benasque	Aug 2015

SERVICE

- Refereed for several journals.
- Reviewer for MathSciNet.
- Co-organised the London number theory seminar in autumn 2018.

REFERENCES

- Prof. David Loeffler, University of Warwick.
- Prof. Henri Darmon, McGill University.
- Prof. John Cremona, University of Warwick.
- Prof. Kevin Buzzard, Imperial College London.