

George Boxer

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Employment

2022–	Royal Society University Research Fellow, Imperial College London
2019–2022	Postdoc, ENS de Lyon and Université Paris-Saclay
2015–2019	L. E. Dickson Research Instructor and NSF Postdoc, University of Chicago

Education

2011–2015	PhD in Mathematics, Harvard University (advisor: Richard Taylor)
2010–2011	Master of Advanced Study (Part III), with distinction, Cambridge University
2006–2010	A. B. in Mathematics, Summa Cum Laude, Princeton University

Publications

1. George Boxer, Frank Calegari, and Toby Gee. Cuspidal cohomology classes for $GL_n(\mathbf{Z})$. preprint, 2023
2. George Boxer, Frank Calegari, Toby Gee, James Newton, and Jack Thorne. The Ramanujan and Sato-Tate conjectures for Bianchi modular forms. preprint, 2023
3. George Boxer and Vincent Pilloni. Higher Hida theory for Siegel modular forms. preprint, 2023
4. George Boxer and Vincent Pilloni. Higher Coleman theory. arXiv:2110.10251, 2021
5. George Boxer and Vincent Pilloni. Higher Hida and Coleman theories on the modular curve. *Épjournal Géom. Algébrique*, 6:Art. 16, 33, 2022
6. George Boxer, Frank Calegari, Toby Gee, and Vincent Pilloni. Abelian surfaces over totally real fields are potentially modular. *Publ. Math. Inst. Hautes Études Sci.*, 134:153–501, 2021
7. George Boxer, Frank Calegari, Matthew Emerton, Brandon Levin, Keerthi Madapusi Pera, and Stefan Patrikis. Compatible systems of Galois representations associated to the exceptional group E_6 . *Forum Math. Sigma*, 7:e4, 2019
8. George Boxer. Torsion in the coherent cohomology of Shimura varieties and Galois representations. Thesis, 2015

9. George Boxer and Peter Diao. 2-Selmer groups of quadratic twists of elliptic curves. *Proc. Amer. Math. Soc.*, 138(6):1969–1978, 2010
10. George Boxer and Peter Diao. Effective nonvanishing of canonical Hecke L -functions. *Proc. Amer. Math. Soc.*, 138(11):3891–3897, 2010
11. G. R. Bowman, K. A. Beauchamp, G. Boxer, V. S. Pande. Progress and challenges in the automated construction of markov state models for full protein systems. *J. Chem. Phys.*, 131(124101), 2009

Invited Talks

- 5/2023 “Summer School on the Arithmetic of the Langlands Program”, Bonn
- 11/2022 Paris/London Number Theory Seminar,
- 11/2022 London Number Theory Seminar,
- 11/2022 Warwick Number Theory Seminar,
- 8/2022 “Community Building in the Langlands Program”, Bonn
- 6/2022 “Galois Representations, Automorphic Forms and L-Functions”, Luminy
- 5/2022 “Rencontres arithmétiques”, Caen
- 12/2021 “Recent Advances in Modern p-Adic Geometry” (lectures series with V. Pilloni)
- 11/2021 “L-functions and Iwasawa theory”, Roscoff
- 11/2021 Séminaire d’Arithmétique et de Géométrie Algébrique, Université Paris-Saclay
- 1/2021 Cambridge Number Theory Seminar
- 12/2020 “Higher Coleman Theory and applications” (lecture series with V. Pilloni), Montreal
- 10/2020 Automorphic Forms and Arithmetic Seminar, Columbia
- 9/2020 “Serre weight conjectures and Geometry of Shimura varieties”, Montreal
- 7/2020 “Workshop Arithmetic Geometry”, Oberwolfach
- 1/2020 Stanford Number Theory Seminar
- 11/2019 Séminaire Groupes Réductifs et Formes Automorphes, Jussieu
- 10/2019 “Modularity and Moduli Spaces”, Oaxaca
- 9/2019 Séminaire d’arithmétique, ENS Lyon
- 7/2019 “p-adic modular forms and Galois representations”, Sheffield
- 7/2018 “p-adic Langlands Correspondence, Shimura varieties and Perfectoids”, Luminy
- 12/2017 University of Chicago Number Theory Seminar
- 11/2017 “Workshop on Motives, Galois Representations and Cohomology around the Langlands Program”, IAS
- 5/2017 “Mini-workshop on Geometric Methods in Number Theory and Representation Theory”, Northwestern
- 6/2016 “Workshop on Shimura Varieties and Related Topics”, National Taiwan University
- 9/2015 “Clay Research Conference on Motives and Automorphic Forms”, Oxford
- 8/2015 “Reductions of Shimura Varieties”, Oberwolfach
- 6/2015 “Arithmetic geometry, representation theory and applications”, Luminy
- 4/2015 “Upstate Number Theory Conference”, Cornell
- 3/2015 “p-adic methods in the theory of classical automorphic forms”, Montreal
- 10/2014 University of Chicago Number Theory Seminar
- 10/2014 Northwestern Number Theory Seminar
- 6/2014 “p-adic Variation in Number Theory”, Boston University
- 5/2014 “The cohomology of arithmetic groups and the Langlands program”, Barbados
- 4/2014 Princeton/IAS Number Theory Seminar

Fellowships and Honors

2022–2027	Royal Society University Research Fellow
2015–2018	NSF Postdoctoral Research Fellowship
2011–2015	NSF Graduate Research Fellowship
2011–2014	Harvard Peirce Fellowship
2010–2011	Churchill Scholar (Cambridge)

Courses Taught

	University of Chicago:
Spring 2019	Math 202, Abstract Linear Algebra
Winter 2019	Math 258, Honors Basic Algebra 2
Fall 2018	Math 257, Honors Basic Algebra 1
Fall 2018	Math 383, (higher) Hida Theory
Winter 2018	Math 258, Honors Basic Algebra 2
Fall 2017	Math 175, Elementary Number Theory
Winter 2017	Math 255, Basic Algebra 2
Fall 2016	Math 254, Basic Algebra 1
	Harvard University:
Spring 2015	Math 21b, Linear Algebra and Differential Equations
Fall 2013	Math 1b, Calculus, Series, and Differential Equations