

Alex Torzewski

PERSONAL DATA

PLACE AND DATE OF BIRTH: London, United Kingdom | 27/07/1992
NATIONALITY: British
WORK ADDRESS: Department of Mathematics, 25 Gordon Street,
University College London, London, WC1H 0AY, United Kingdom
PHONE: +44 7758159405
E-MAIL: alex.torzewski@gmail.com
WEBSITE: www.homepages.ucl.ac.uk/~ucahato/

RESEARCH INTERESTS

Arithmetic Geometry, Number Theory, Representation Theory

EMPLOYMENT

2018–2020 Post-doc – **University College London** (EPSRC Doctoral Prize)
Under the supervision of Sarah Zerbes

EDUCATION

2014–2018 PhD in NUMBER THEORY, **University of Warwick**, Coventry
“Regulator constants of integral representations, together with relative motives over Shimura varieties”, under the supervision of Alex Bartel

2013–2014 Master of Advanced Study (Part III) in MATHEMATICS, **University of Cambridge**, Cambridge – Distinction

2010–2013 Bachelor of Science in MATHEMATICS, **University of Warwick**, Coventry
1st Class (Hons)

2003–2010 Secondary school, **Colyton Grammar School**, Devon
A-levels in 4 subjects

PUBLICATIONS AND PREPRINTS

- *Regulator constants of integral representations of finite groups*, Alex Torzewski, 2019, to appear in Mathematical Proceedings of the Cambridge Philosophical Society, available at arXiv: [1703.10602](https://arxiv.org/abs/1703.10602) [[math.RT](#)].
- *Functoriality of motivic lifts of the canonical construction*, Alex Torzewski, 2019, preprint available at arXiv: [1812.08628](https://arxiv.org/abs/1812.08628) [[math.AG](#)].

MEMBERSHIPS

- Member of the London Mathematical Society
- Member of the University and College Union (UCU)

TEACHING EXPERIENCE

- 2019–2020 | Teaching – UNIVERSITY COLLEGE LONDON
Lecturer for REPRESENTATION THEORY (4th year course). Responsible for choice of syllabus, lecturing and setting the exam.
- AUTUMN 2016 | Marking – UNIVERSITY OF WARWICK, Coventry
Assignment marking for the TCC (graduate courses via video conferencing for UK universities) course Homological algebra.
- AUTUMN 2015 | Teaching Assistant – UNIVERSITY OF WARWICK, Coventry
Teaching assistant for the 4th year course Modular Forms.
- 2015–2017 | Marking – UNIVERSITY OF WARWICK, Coventry
Exam marking for modules:
 - Introduction to Abstract Algebra (2015,2016)
 - Foundations (2017)
 - Algebra I (2017)
 - Topics in Number Theory (2017)
- 2015 | Supervisions – UNIVERSITY OF WARWICK, Coventry
Small group teaching of 1st year students, meeting for two hours a week throughout the year and marking work for all their core modules.
- 2014–2017 | Class Test Organiser – UNIVERSITY OF WARWICK, Coventry
Responsible for the writing and administering of the class tests for 1st year compulsory module Foundations taken by 600 students.

UNDERGRADUATE RESEARCH SUPERVISION

- 2019–2020 | 4th Year Project – UNIVERSITY COLLEGE LONDON
During the academic year 2019–2020 I will be supervising Chen Guowei for a project entitled “Abelian Galois representations”.
- SUMMER 2019 | Summer Project – UNIVERSITY COLLEGE LONDON
During the summer of 2019 I mentored Harkaran Uppal on a project entitled “Analytic Class Number Formula and applications of L-functions”

OUTREACH

- Nov. 2019 | General access talk – UNIVERSITY COLLEGE SCHOOL, London
I will be giving an outreach talk on knot theory suitable for interested Year 12 and 13 students.
- JULY 2014 | Careers in Mathematics – COLYTON GRAMMAR SCHOOL, Devon
I gave a presentation to interested Year 12 students about the various options open for academic work in mathematics.

COMPUTER SKILLS

- Basic Knowledge: LINUX, Sage, MATLAB, Beamer
Intermediate Knowledge: LATEX, MAGMA

OTHER PROFESSIONAL EXPERIENCE

- SPRING 2019 | Seminar Organiser – LONDON NUMBER THEORY SEMINAR
Co-organised with another Post-doc the London number theory seminar in Spring 2019 whilst I was at UCL. Responsible for selecting and inviting speakers from within Europe.
- SUMMER 2017 | Organised Study Group – UNIVERSITY OF WARWICK, Coventry
Co-organised the number theory study group on p -divisible groups.
- SPRING 2016 | Organised Junior Study Group – UNIVERSITY OF WARWICK, Coventry
Organised a PhD study group on étale cohomology.
- 2016–2018 | Member of SGSLC – UNIVERSITY OF WARWICK, Coventry
Active member of the committee responsible for representing PhD students within the department.
- SUMMER 2013 | Undergraduate Research Project – UNIVERSITY OF WARWICK, Coventry
Awarded funding by URSS. A summer research project with Prof. Alex Bartel into Galois Module Structures of Rings of Integers and additional work in Integral Representation Theory.

SELECTED SEMINARS AND TALKS

- NOV. 2019 | Young Researchers in Algebraic Number Theory, Conference, Warwick
- JUL. 2019 | JAVA, Conference, Tatihou, France
- JUL. 2018 | JAVA, Conference, Tatihou, France
- APR. 2018 | ICMAT Seminar, Madrid
- FEB. 2018 | Pure Mathematics Seminar, Exeter
- NOV. 2017 | Algebra Seminar, Glasgow
- JULY 2017 | Journées Arithmétiques, Caen
- MAR. 2017 | Number Theory Seminar, Nottingham
- FEB. 2017 | Number Theory Seminar, Cambridge
- JAN. 2017 | Junior Number Theory, Oxford
- DEC. 2016 | Linfoot Seminar, Bristol
- JUNE 2015 | Hopf Galois Theory and Galois Module Structure, Conference, Exeter
- APR. 2015 | TCC Number Theory Day, Imperial College, London

AWARDS AND GRANTS

- 2018–2020 | EPSRC Doctoral Prize (UCL)
- NOV. 2017 | Severo Ochoa visitor programme grant: Jointly, together with Daniel Macías Castillo, awarded a travel grant of 750€, which enabled me to visit Daniel in Madrid and discuss elements of my thesis.
- AUG. 2015 | Poster prize at Young Researchers in Mathematics 2017, Oxford
- 2014–2018 | EPSRC PhD studentship
- JUL. 2014 | Made a Scholar of Robinson College Cambridge in recognition of Part III results
- SEPT. 2012 | Ron Lockhart Prize for Achievement & Excellence within the Mathematics Institute, Warwick