

Georgia Harbor-Collins

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HIGHER EDUCATION

Aug. 2022 - Present Ph.D. candidate at the **University of Connecticut (UConn)**.
Ph.D. Advisor: *Keith Conrad*.
Oct. 2021 - June 2022 Part III of the Mathematical Tripos (MASt), **University of Cambridge**.
Oct. 2020 - Oct. 2021 MSc in Pure Mathematics, **Imperial College London**.
Sep. 2017 - June 2020 BSc in Mathematics, **Royal Holloway University of London**.

RESEARCH INTERESTS

Algebraic number theory. In particular, formal groups and p -adic analysis.

PAPERS AND PREPRINTS

1. An O_K -basis for the image of a Lubin-Tate logarithm on π -regular extensions of K . Submitted (2026).

MASTER'S DISSERTATION TOPICS

A dissertation on **counting cubic number fields**, for the completion of Part III.

A dissertation on **approximations in valued fields**, for the completion of my Master's degree at Imperial.

WORKSHOPS AND CONFERENCES

ANTeater'26 <i>UC Irvine.</i>	17/08/26 - 21/08/26
The Gross—Zagier Formula, 40 Years Later <i>MIT.</i>	03/08/26 - 07/08/26
Langlands Programme: School & Symposium <i>University of Sheffield.</i>	07/07/26 - 17/07/26
Rethinking Number Theory 7 Project Group (Wissam Ghanous): High Order Elements in Finite Fields.	22/06/26 - 03/07/26
Connecticut Summer School in Number Theory (CTNT) Graduate Assistant. <i>University of Connecticut.</i>	01/06/26 - 07/06/26
Arizona Winter School Project Group (John Voight and Eran Assaf): Picard Modular Forms.	07/03/26 - 11/03/26
Preliminary Arizona Winter School <i>Virtual program.</i> Topic: Analysis and Implementation of Algorithms in Number Theory.	22/09/25 - 21/11/25
Formalizing Class Field Theory <i>Mathematical Institute, University of Oxford.</i>	21/07/25 - 25/07/25
The Legacy of John Tate, and Beyond <i>Harvard University.</i>	17/03/25 - 21/03/25
Murmurations in Arithmetic Geometry and Related Topics <i>Simons Center for Geometry and Physics, Stony Brook University.</i>	11/11/24 - 15/11/24
Preliminary Arizona Winter School <i>Virtual program.</i> Topic: Local Fields.	23/09/24 - 22/11/24
Connecticut Summer School in Number Theory (CTNT) <i>University of Connecticut.</i>	10/06/24 - 16/06/24
Upstate NY Number Theory Conference <i>University of Rochester.</i>	01/04/23 - 02/04/23
Preliminary Arizona Winter School <i>Virtual program.</i> Topic: Elliptic Curves.	02/10/23 - 10/11/23

TALKS AND PRESENTATIONS

On the Image of Lubin-Tate Logarithms (Poster Presentation), <i>University of Sheffield.</i>	13/07/26
p-adic Computations in Sage, <i>UConn Number Theory Reading Group.</i>	19/11/25
The Separating Powers Trick, <i>UConn Math Club.</i>	05/11/25
p-adic Fields and the LMFDB, <i>UConn Number Theory Reading Group.</i>	24/09/25
Commuting Polynomials (undergraduate version), <i>Mathematics Continued Conference.</i>	08/03/25
Commuting Polynomials (graduate version), <i>UConn S.I.G.M.A Seminar.</i>	22/11/24
Adele & Idele Class Groups of a Number Field, <i>UConn Number Theory Reading Group.</i>	05/11/24
Commuting Polynomials (undergraduate version), <i>UConn Math Club.</i>	16/10/24

ACADEMIC AWARDS AND ACHIEVEMENTS

Summer Doctoral Dissertation Fellowship, <i>University of Connecticut.</i>	2026
Predoctoral Fellowship, <i>University of Connecticut.</i>	2026
CLAS Summer Fellowship, <i>University of Connecticut.</i>	2025
William H. Ezell Scholarship, <i>University of Connecticut.</i>	2025
Math Teaching Innovation Fellowship, <i>University of Connecticut.</i>	2024
IMA Graduate prize for outstanding performance, <i>Institute of Mathematics and its Applications.</i>	2020
Martin-Holloway prize for best single honours finalist in Mathematics, <i>Royal Holloway UoL.</i>	2020
Margaret-Jackson prize for outstanding performance in Pure Mathematics, <i>Royal Holloway UoL.</i>	2019
Principal's Excellence Scholarship, <i>Royal Holloway University of London.</i>	2017

TEACHING EXPERIENCE

Primary Instructor (UConn)	
MATH 1071Q: Calculus for Business and Economics	Fall 2025 - Spring 2026
MATH 1131Q: Calculus I	Fall 2024 - Spring 2025
MATH 1020Q: Problem Solving	Spring 2024
Teaching Assistant (UConn)	
MATH 1132Q: Calculus II	Summer 2025
MATH 1131Q: Calculus I	Fall 2022 - Fall 2023, Summer 2024, 2026
Online Tutor	
Tutor for A-Level Maths & Further Maths	May 2021 - August 2022

MENTORSHIP

Directed Reading Program (DRP)	
<i>The DRP pairs undergraduate students with graduate student mentors for semester-long independent study projects. At the end of the semester, the mentee gives a 15-20 minute presentation on a topic related to the project.</i>	
I supervised a DRP project in p-adic Analysis.	Fall 2025
Other Mentorship	
TA Mentor to first year graduate students.	Fall 2024 - Spring 2025

MEMBERSHIP

UConn Number Theory Reading Group	Fall 2022 - present
UConn Algebra Seminar Group	Fall 2022 - present
Association for Women in Mathematics (AWM)	Fall 2022 - present
CLAS Graduate Student Advisory Committee	Fall 2025 - Spring 2026
<i>Purpose: to provide the CLAS Dean's Office with feedback on matters concerning graduate students in the College.</i>	

COMPUTER SKILLS

LaTex, PARI, SageMath, Magma, Lean 4.