

Holly Green

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Personal information

Gender	Female
Date of birth	January 1st 1997
Nationality	British

Education

2023 – Present	Heilbronn Research Fellow, University of Bristol
2019 – 2023	PhD in Pure Mathematics, University College London Thesis title: The parity conjecture for hyperelliptic curves. Supervisor: Professor Vladimir Dokchitser.
2015 – 2019	MSci Mathematics (First class), Imperial College London Thesis title: Codes in groups. Supervisor: Professor Martin W. Liebeck.

Research interests

Number theory	My research concerns problems related to the Birch and Swinnerton-Dyer conjecture, and its generalisation to abelian varieties, with an emphasis on the the parity conjecture. More generally, I am interested in using the local arithmetic attached to curves to compute the parity of ranks of abelian varieties.
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Publications and preprints

Nov. 2022	Parity of ranks of Jacobians of curves , with V. Dokchitser, A. Konstantinou and A. Morgan. <i>ArXiv:2211.06357</i> .
Sept. 2022	The 2-parity conjecture for elliptic curves with isomorphic 2-torsion , with C. Mais-tret. <i>Proceedings of the Royal Society A</i> 478.2265 (2022): 20220112.
Aug. 2020	Some codes in symmetric and linear groups , with M. W. Liebeck. <i>Discrete Mathematics</i> 343.8 (2020): 111719.

Conference and seminar talks

Jan. 2024	Great Western Number Theory Seminar Title: On the parity conjecture for elliptic curves. <i>University of Bath, UK</i>
Nov. 2023	Paris–London Number Theory Seminar Title: On the parity conjecture for elliptic curves. <i>Université de Paris 8 & Université Sorbonne Paris Nord, France</i>
Jan. 2023	London Number Theory Seminar Title: An arithmetic analogue of the parity conjecture. <i>University College London, UK</i>
Aug. 2022	Mordell 2022: 100 years of elliptic curves Title: A new rank parity computing machine. <i>University of Cambridge, UK</i>
Mar. 2022	Linfoot Number Theory Seminar Title: Parity of ranks of elliptic curves. <i>University of Bristol, UK</i>

Mar. 2022	London Junior Number Theory Seminar Title: Parity of ranks of elliptic curves.	<i>King's College London, UK</i>
Mar. 2022	Glasgow Algebra and Number Theory Seminar Title: Parity of ranks of elliptic curves.	<i>University of Glasgow, UK</i>
Mar. 2021	London Junior Number Theory Seminar Title: Parity of ranks of hyperelliptic curves.	<i>Online</i>
Dec. 2019	Bristol-London Mini Workshop Title: Understanding values of the Mobius function via root numbers.	<i>University College London, UK</i>

Awards and scholarships

2022	UCL Monica Hulse Scholarship
2021	UCL Mayer de Rothschild Scholarship for Pure Mathematics
2021	UCL Archibald Richardson Scholarship for Pure Mathematics
2019 – 2023	UCL Engineering and Physical Sciences Research Council Studentship EP/R513143/1
2018	Imperial College London Mathematics Dept. Undergraduate Research Project Award
2017	Imperial College London Mathematics Dept. Second Year Improvement Prize

Organisation

2024 – Present	Linfoot Number Theory Seminar Co-organised with Jenny Roberts, Besfort Shala and Jacqueline Voros .	<i>University of Bristol, UK</i>
Oct. 2022	Galois representations & root numbers study group	<i>University College London, UK</i>
Jun. 2022	Women in Number Theory and Geometry Spring Retreat Co-organised with Lilybelle Cowland-Kellock, Ilaria di Dedda and Sara Veneziale.	<i>Norfolk, UK</i>
May 2022	Elliptic curves over function fields study group	<i>University College London, UK</i>

Grants

Jan. 2022	Heilbronn Small Grants Call, IMA Small Grant Scheme, Foundation Compositio Mathematica, UCL “Take bold action for inclusion” funding call , awarded £2000.00, £600.00, €2400.00, £2000.00 respectively. <i>Applied for jointly with Lilybelle Cowland-Kellock, Ilaria di Dedda and Sara Veneziale.</i>
Oct. 2021	Kovalevskaya grant to attend ICM 2022 , unclaimed due to event cancellation.

Languages and computing skills

English	Native speaker.
German, Italian	Basic.
Computing	Excellent command of \LaTeX . Basic in Magma, Mathematica, MatLab, Python and SageMath.