

Prof. K. HOUSTON

Personal Details

Full Name Kevin Houston
 D.o.B 20/09/1968
 Nationality British
 Address School of Mathematics
 University of Leeds
 Leeds
 LS2 9JT
 United Kingdom
 Email k.houston@leeds.ac.uk
 Website <http://www.kevinhouston.net>
 YouTube <https://www.youtube.com/user/DrKevinHouston>
 X/Twitter https://twitter.com/k_houston_math



Employment

Professor of Mathematics Education and Public Engagement, University of Leeds	May 2023 – present
Senior Lecturer in Mathematics, University of Leeds	Aug 2005 – Apr 2023
Lecturer in Mathematics, University of Leeds	Mar 2000 – Jul 2005
Senior Lecturer in Mathematics, Middlesex University	Sep 1998 – Feb 2000
Lecturer in Mathematics, Middlesex University	Oct 1996 – Aug 1998
EPSRC funded Research Associate at the University of Liverpool.	Oct 1994 – Aug 1996
Teaching Associate at the Mathematics Institute, University of Warwick	Oct 1993 – Sep 1994

Qualifications

Ph.D. Mathematics, University of Warwick	1991 - 1994
M.Sc. Mathematics, University of Warwick	1990 - 1991
B.Sc. (Hons) Mathematics Class I, University of Newcastle Upon Tyne	1987 - 1990
Postgraduate Certificate in Higher Education (PGCHE), Middlesex University	1996 - 1998

Publications

Research papers

A list of my research papers can be found at <http://www.kevinhouston.net/papers.html>

Books

1. K. Houston, *How to Think Like a Mathematician*, Cambridge University Press, 2009. Undergraduate textbook.
2. Proceedings of Variational Problems in Differential Geometry Conference at Leeds, March 2009, ed., R. Bielawski, K. Houston, J.M. Speight, London Mathematical Society Lecture Notes Series, Cambridge University Press, 2011.
3. Proceedings of 11th Workshop on Real and Complex Singularities in São Carlos 2010, ed., V.V. Goryunov, K. Houston, R. Wik Atique, in preparation.
4. K. Houston, *Complex Analysis: An introduction*. 2017. Self-published.

My undergraduate textbook *How to Think Like a Mathematician* is an international best-seller and has been adopted on many courses. It has been translated into Turkish, French, German, Korean, and with an Italian version in preparation.

Committee and service since 2010

2010–13	LMS Holgate Lecturer
2010–13	External Examiner for Oxford Brookes University (BSc Mathematics)
2010–15	Associate editor of the Journal of Singularities
2012–13	External Examiner for Open University (MU123 Module)
2012–17	External Examiner for Surrey University (BSc Mathematics)
2012–17	Member of Edexcel Subject Advisory Group (on A Level reforms)
2012–2023	Member of Education Committee of the London Mathematical Society
2012–2023	Member of British Science Festival Mathematical Section
2012–17	Chair of LMS Public Engagement sub-committee
2014–18	MAGIC (Taught Course Centre) Management Committee
2014–18	MAGIC Academic Steering Committee
2017–	Co-founded Talking Maths in Public and am Treasurer and Trustee
2017–2023	Education Secretary of the London Mathematical Society
2017–2023	Royal Society ACME Contact Group for A Level Mathematics
2017–2023	Member of LMS Council and LMS Trustee
2017–2023	Member of LMS Finance and General Purposes Committee
2017–2023	Member of LMS Investment Sub-Committee
2017–2023	Member of Mathematics Teacher Training Scholarships Committee
2017–2023	LMS representative on Joint Mathematical Council
2019	MMATH/BSc Mathematics Curriculum Review, University of Liverpool
2019–2023	Co-opted Trustee of Joint Mathematical Council
2020	Academic Review, Heriot-Watt University (Teaching)
2020–	Organiser and co-founder Teaching and Learning Mathematics Online
2022	Member of QAA MSOR Benchmark Advisory Group
2023	Selection Panel for MathsWorldUK Community Mathematician
2023	External subject expert for Academic Review, University of Glasgow
2023–	Advisory Panel for Maths Week England
2023–	Member of Academic Advisory Committee MESME

Recent Talks

Education

Date	Title	Location
Sep 2023	How to Think Like a Mathematician	INI, Cambridge
Apr 2023	Proof and Calculations	Edinburgh University
Apr 2023	Problems in UK Mathematics Education and How to Solve Them	BMC Bath
Jun 2020	Teaching students to write mathematics	Sheffield (online)
Apr 2020	Accessibility: Approaching Legislation	HoDoMS online conf
Jan 2020	Active learning: learning vs. feeling of learning	Leeds
Apr 2019	Thinking about Mathematical Thinking	BMC Lancaster
Apr 2018	The transition to thinking like a mathematician	Warwick
2018, 2019, 2021, 2022	How to Think Like a Mathematician	INI, Cambridge

Engagement

In addition to various schools talks I have given recent talks at the following.

Date	Title	Location
Jul 2022	The Maths of Shape: Making Homer Simpson Dance	Leeds Café Scientifique
Feb 2021	Maths of Shape	Bradford Café Scientifique
Sep 2019	Maths of Shape	Otley Science Café

Research

Date	Title	Location
Jun 2022	New Methods in Understanding Shape	Leeds
Sep 2017	Applications of sparsity methods within geometry	Oxford

Public Engagement

Organisation

- ❑ Co-organiser for MATRIX2016 conference (Leeds University): Funded by Mathematical Association, IMA, Leeds Phil and Lit, OR Society, LMS. <https://momath.org/home/welcome-to-matrix-2016/>
- ❑ Co-founder and co-organiser of Talking Maths in Public (TMiP) conference <https://talkingmathsinpublic.uk>
 - TMiP 2017 (Bath University)

- TMiP 2019 (Cambridge INI)
- TMiP 2021 (Edinburgh ICMS online)
- TMiP 2023 (Newcastle University)

Over £50K total funding obtained from organisations such as the Mathematics Association, London Mathematical Society, University of Bath, Big STEM, Maths Inspiration, F/Flow Edu, Maplesoft, ICMS, Heilbronn Institute, Isaac Newton Institute, Newcastle University.

- ❑ Co-organiser of Clopen Mic Night <https://clopenmicnight.com>
 - Clopen Mic Night #1 Clopen Night (Aug 2021)
 - Clopen Mic Night #2: Clopen Winterval (Jan 2022)
 - Clopen Mic Night #3: Clopen Sept (Sep 2022)
 - Clopen Mic Night #4: Chestnuts roasting on a Clopen fire (Dec 2023)
- ❑ Co-organiser and compere for 24 Hour Maths Games (Oct 2022) <https://24hourmaths.com> Producer and host for the TaskMathster hour of 24 Hour Maths Games
- ❑ Organiser of all London Mathematical Society Popular Lectures (two to four per year) and co-organiser of LMS/Gresham Popular Lectures (one per year) from 2013-2023.
- ❑ Co-organiser of interactive mathematics session for Royal Institution Christmas Lecture live stream evenings at the Bradford Science and Media Museum and Leeds University (Dec 2019). 100+ participants
- ❑ University of Leeds link and volunteer for and advisor to MathsWorldUK since 2013 <https://www.mathsworlduk.com>

Direct engagement

I have been involved in many school and public engagement events. Presented to over 10,000 pupils and members of public since 1997.

- ❑ YouTube channel <https://www.youtube.com/@ProfKevinHouston> with nearly quarter of a million views.
- ❑ Blog <http://www.kevinhouston.net/blog/> with nearly 200K views.
- ❑ Recent TV and Radio appearances
 - ITV regional news Oct 2021, following closure of pure maths research at Leicester
 - Sky News Kate Burley show, Jan 2023, expert interview on Prime Minister statement
 - LBC News, Jan 2023, Prime Minister statement. <https://www.protectpuremaths.uk/news/ppm-responds-to-the-prime-ministers-speech>
- ❑ Viral mathematics stories:
 - Story on The Beatles' A Hard Day's Night Chord appeared in newspapers around the world: <https://www.dailymail.co.uk/sciencetech/article-2201094/Mathematician-claims-solved-mystery-opening-chord-A-Hard-Days-Night.html>

- Tau Day: There were many articles, e.g., <https://www.thetimes.co.uk/article/calculated-to-shock-maths-mutineers-say-numbers-up-for-pi-vpfjcrqpcpk>
- Expert advice sought by BBC: <http://news.bbc.co.uk/1/hi/world/americas/8318626.stm>
- ❑ Work for MathsWorldUK has involved engaging with the public at
 - Millenium Square Bradford, Mar 2019
 - Phil and Lit, 2019, 2020, 2022, 2023
 - Leeds Live Aug 2022
 - MathsCity 2022

Popularisation articles:

- ❑ How to Cheat at Cards, Chalkdust Issue 11, April 2020 <https://chalkdustmagazine.com/features/how-to-cheat-at-cards/>
- ❑ Protect Pure Maths article on the Beatles <https://www.protectpuremaths.uk/blog/we-can-work-it-out-the-beatles-a-hard-days-night-chord>

Other

- ❑ Co-founder and co-organiser of Teaching and Learning Mathematics Online (TALMO), <http://talmo.uk> First two events had 600 participants. I maintain the website, mailing list and YouTube channel.
- ❑ Co-organiser of London Mathematical Society Education Days, 2018, 2019, 2023. (40-80 participants at each.)
- ❑ Taught range of modules at University level in a range of topics including but not limited to: Geometry, Linear Algebra, Group Theory, Analysis, Complex Analysis, Algebraic Topology, Projective Geometry.