Trevor D. Wooley – CV and list of publications (revised 19 October 2026)

Curriculum Vitae: Trevor D. Wooley

Personal Details:
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Primary Research Interests
Analytic and additive number theory, arithmetic geometry, arithmetic combinatorics, discrete harmonic analysis – especially "Analytic methods for Diophantine problems": the Hardy-Littlewood method; applications and theory of exponential sums; Diophantine equations and inequalities in many variables; local (p-adic) solubility of Diophantine systems; distribution of fractional parts of polynomials; density of rational points on varieties.

Education, Qualifications, etc
PhD, 1988-1990, Imperial College of Science and Technology, University of London, England; DIC, PhD in Analytic Number Theory, 1990 (advisor: Professor R. C. Vaughan, F.R.S.); Thesis title "On simultaneous additive equations, and Waring's Problem".
BA, 1984-1988, Gonville and Caius College, University of Cambridge, England;
Open Scholarship 1984-1986, Senior Scholarship 1986-1988;
B.A. (Hons) First Class in Mathematics, 1987;
Certificate of Advanced Study in Mathematics, 1988;
M.A. (hon.), 1991;
1977-1983, Aylesbury Grammar School, Aylesbury, Buckinghamshire, England.

Postdoctoral position
1990-1991, School of Mathematics, Institute for Advanced Study, Princeton, New Jersey, U.S.A.; One year membership, participating in the special year on Analytic Number Theory (advisor: Professor E. Bombieri).

Positions held
2019 – present, Andris A. Zoltners Distinguished Professor of Mathematics, Purdue University, West Lafayette, Indiana (from August 12th, 2019);
2015 – 2016, Head of Pure Mathematics, University of Bristol;
2007 – 2019, Professor of Pure Mathematics, University of Bristol;
1998 -- 2007, Professor, Department of Mathematics, University of Michigan, Ann Arbor (serving as Chair (=Head) of Department, July 1st, 2002 to June 30th, 2005);
1995 -- 1998, Associate Professor, Department of Mathematics, University of Michigan;
1991 -- 1995, Assistant Professor, Department of Mathematics, University of Michigan.

Visiting Positions
September 2025 – May 2026, Member, School of Mathematics, Institute for Advanced Study, Princeton, NJ.
July 2024, Gauss Visiting Professor, Göttingen, Germany.
March 2024, Visiting Member, Institut Mittag-Leffler, Djursholm, Sweden.
June 2023, Gauss Visiting Professor, Göttingen, Germany.
January 2019, Gauss Visiting Professor, Göttingen, Germany.
April 25 – May 25 2017, Visiting Member, Theme Semester on Analytic Number Theory, MSRI, Berkeley, CA;
February 15 – April 15 2017, Co-organizing member, Fields Institute, Toronto: Theme Semester on Unlikely Intersections, Heights, and Efficient Congruencing;
March-May 2015, Gauss Visiting Professor, Göttingen, Germany.

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June 2014, Visiting member of Isaac Newton Institute for Mathematical Sciences, University of Cambridge, England; Program on Interactions between dynamics of group actions and Number Theory;

March/April, 2013, Visiting Professor, Theme Semester on Arithmetic and Geometry, Hausdorff Institute for Mathematics, Bonn, Germany;

February/April, 2009, Visiting Professor, Theme Semester on Diophantine Equations, Hausdorff Institute for Mathematics, Bonn, Germany;

Winter Semester, 2006, Visiting Member, Theme Semester on Rational Points on Higher Dimensional Varieties, MSRI, Berkeley, CA;

Winter Semester, 2006, Visiting Member, Theme Year on Analysis in Number Theory, C.R.M., Montreal, Quebec, Canada;

Jan. - Jun., 2002, Program on Analytic Number Theory, Max Planck Institute, Bonn, Germany;

Sept. - December, 2001, Visiting Professor, Department of Mathematics, Harvard University, Cambridge, Massachusetts;

Feb. - Mar., 1999, Salem Prize Visitor, School of Mathematics, Institute for Advanced Study and Princeton University, Princeton, New Jersey;

May-Jun. 1998, Visitor, Mathematisches Institut A, Universität Stuttgart, Germany;

Sep. 1997 - Apr. 1998, Visiting Fellow, Department of Mathematics, Princeton University;

Mar. - Apr. 1993, Visiting member of Isaac Newton Institute for Mathematical Sciences, University of Cambridge, England; Program on L-functions.

June 1992, SERC Visiting Fellowship, Imperial College, London, UK.

Research Grants, Fellowships, etc.

2025-2027, PI, US National Science Foundation Grant DMS-2502625, "The Hardy-Littlewood method: explorations on the frontier", $240,000;

2025-2026, PI, Simons Fellowship in Mathematics MPS-SFM-00011955, “Analytic Number Theory: Modern Challenges for the Hardy-Littlewood Method”, $157,774.42;

2020-2025, PI, US National Science Foundation Grant DMS-2001549, "Analytic Number Theory Motivated by Approximate Translation Invariance", $500,000;

2019-2022, co-PI, US National Science Foundation Grant DMS-1854398 “FRG: Averages of L-functions and Arithmetic Stratification", with J. B. Conrey (PI), J. P. Keating, H. Iwaniec, K. Soundararajan, $1,200,000;

2016-2019 European Research Council Advanced Grant AdG-695223, “Exponential sums, translation invariance, and applications” (5-year award, €1,873,483 terminated with move to Purdue; approximately $2,040,000);

2007--2012 Wolfson Research Merit Award of the Royal Society, £75,000;

2006, PI, US National Science Foundation 5-Year Award, “The circle method as an interface of arithmetic geometry, additive combinatorics and harmonic analysis”, $450,000;

2004, co-PI, US National Science Foundation Conference Grant to fund U.S.-based students and postdoctorates to attend the Canadian Number Theory Association meeting, June 16-23, 2004, in Toronto. Co-PI with K. Soundararajan (UM), $10,000;

2002 - 2006, PI, US National Science Foundation 3-Year Award, “Applications of the Hardy-Littlewood Method in Number Theory and beyond”, $197,313;

1999 - 2002, PI, US National Science Foundation 3-Year Award, “Diophantine problems in many variables”, $150,000;

1996 - 1999, PI, US National Science Foundation 3-year Standard Grant, “Analytic methods for Diophantine problems”, $115,074;

1995 - 1998, PI, US NSF GIG grant for “Michigan Research Group in Number Theory: A professional development program for new doctorates”, $199,620;

1993 - 1998, David and Lucile Packard Foundation Fellow, $500,000;

1993 - 1995, Alfred P. Sloan Foundation Research Fellow, $30,000;

1993 - 1996, PI, National Science Foundation 3-year Standard Grant, “On exponential sums and additive Diophantine equations”, $55,450;
June - July, 1992, Rackham Faculty Fellowship: “Applications of Exponential Sums”, University of Michigan, $7,000.

Prizes and Honours

45-minute Invited Speaker at 2014 International Congress of Mathematicians, Seoul, South Korea (Number Theory)
Elected Fellow of the American Mathematical Society, 2012;
Frohlich Prize of the London Mathematical Society, 2012;
Elected Fellow of the Royal Society, May 2007;
45-minute Invited Speaker at 2002 International Congress of Mathematicians, Beijing, China (Number Theory);
Salem Prize, 1998;
Junior Berwick Prize of the London Mathematical Society, 1993.

Also:

Purdue University, Ruth and Joel Spira Teaching Award for Excellence in Graduate Teaching, Department of Mathematics, 2022.

University of Michigan, LS&A Excellence in Research and Teaching Awards, 1999;

University of Michigan, Henry Russel Award for 1997-98;

University of Michigan, Excellence in Research Award, 1995;

Honorary Fellow of the Hardy-Ramanujan Society, 1995;

Distinguished Award of the Hardy-Ramanujan Society, 1992;

Institutional Responsibilities

2015 – 2016 Head of Pure Mathematics, Univ. of Bristol, UK
2010 – 2015 Strategic Director, Heilbronn Inst. for Mathematical Research, Univ. of Bristol, UK
2008 – 2010 Associate Director, Heilbronn Institute for Mathematical Research, Univ. of Bristol
2002 – 2005 Chair (=Head) of Mathematics Department, University of Michigan, USA
1991 – 2007 Member of Personnel (=Hiring) Committee, Dept. Executive Committee, Number Theory Area Spokesperson, Doctoral Committee, for multi-year terms spanning 1991—2007 at the Department of Mathematics, University of Michigan.

Purdue University Committee Assignments (from 2019)

2024-2025 Faculty Council (College of Science), Promotions Subcommittee (Math), Awards Committee (Math)
2023-2024 Faculty Council (College of Science), GCAP, Personnel Committee (Math), Awards Committee (Math), Personnel Committee (Math)
2022-2023 Area Committee (Promotions, College of Science), Faculty Council (College of Science), Personnel Committee (Math), Awards Committee (Math), Distinguished Professors Nomination Committee
2021-2022 Area Committee (Promotions, College of Science), Awards Commitee (Math)
2020-2021 Promotions Subcommittee (Math), Personnel Committee (Math), Awards Committee (Math)
2019-2020 Personnel Committee (Math), Awards Committee (Math)
2019-2025 Co-organiser, PANTHA (Purdue Analytic Number Theory and Harmonic Analysis) Seminar

National and International Committees

2022 NSF Panel Member
2020 NSF Panel Member
2019 -- 2020 Scientific Committee for selection of speakers, Journees Arithmetiques 2021 in Nancy (postponed to 2022)
2012 – 2014 Royal Society Section 1 Committee, UK
2010 – 2013 Scientific Steering Committee, Isaac Newton Institute, Cambridge, UK
2010 – 2012 Royal Society Wolfson Merit Award Selection Committee, UK
2008 – 2009 London Mathematical Society Prizes Committee, UK
2005 External Review Committee, Dept. of Math., Oklahoma State U.
1995 – 1997 US Math. Representative on Organizing Committee of the German-American Frontiers of Science Symposia, organized under the auspices of the National Academy of Sciences and the Alexander von Humboldt Foundation. Joint organizer of 1996 session on Cryptography and Quantum Cryptography.

Editorial Boards
2021 - present, Mathematika
2005 - present, Online Journal of Analytic Combinatorics;
2017 - 2021 Journal de Théorie des Nombres de Bordeaux
2005 - 2021 Compositio Mathematica (international journal based in Netherlands);
2005 - 2012 Mathematical Reviews Editorial Board (M.R. is the primary reviewing authority in international mathematics run by the American Mathematical Society);
2003 - 2006 Michigan Math. Journal;

Membership of Scientific Societies
1990/91 – Member of European Math. Soc.,
American Math. Soc.,
London Math. Soc.
2007 – Fellow of the Royal Society (UK National Academy of Science)

Graduate Research Students (PU=Purdue University, UoB=Univeristy of Bristol, UM=University of Michigan, Ann Arbor)

(26) Atal Bhargava, current (PU);

(25) Ben Doyle, current (PU);

(24) Daniel Flores, “Applications of the Hardy-Littlewood method to forms in many variables”, 2026 (PU);

(23) James Cumberbatch, “Digitally restricted integers and related problems”, 2025 (PU);

(22) Kiseok Yeon, “On Diophantine problems in many variables”, 2024 (PU);

(21) Taylor Daniels, “The asymptotics of some signed partition numbers”, 2024 (joint with Ben McReynolds) (PU);

(20) Javier Pliego, "Waring's problem in thin sets and mixed moments of the Riemann zeta function", 2021 (UoB);

(19) Akshat Mudgal, "Arithmetic combinatorics of Vinogradov systems and related topics", 2021 (UoB);

(18) Konstantinos Poulias, "On Diophantine problems involving fractional powers of integers", 2021 (UoB);

(17) Lara Du, "Superirreducibility of polynomials, binomial coefficient asymptotics and stories from my classroom", 2020 (joint with M. Jonsson) (UM)

(16) Kirsti Biggs, "On additive problems involving shifted integers and ellipsephic sets", 2019 (UoB);

(15) Sam Chow, “Shifts, averages and restrction of forms in several variables”, 2016 (UoB);

(14) Thomas Bloom, “Quantitative results in arithmetic combinatorics”, 2014 (UoB);

(13) Julia Brandes, “Local-global principles for linear spaces on hypersurfaces”, 2014 (UoB);

(12) Alan Lee, “On the applications of the circle method to function fields, and related topics”, 2013 (UoB);

(11) Damaris Schindler, “On Diophantine equations involving norm forms and bihomogeneous forms” (joint with T. D. Browning), 2013 (UoB);

(10) Eugen Keil, “L^p-estimates for arithmetic sequences and quadratic forms on dense sets”, 2013 (UoB);

(9) Sean Prendiville, “Mean value estimates and applications in additive combinatorics”, 2012 (UoB);

(8) Craig Spencer, “Analytic methods for Diophantine problems'” 2008 (UM);

(7) Matthew Smith, “On solution-free sets for simultaneous additive equations”, 2007 (UM);

(6) Mike Knapp, “Forms in many variables over p-adic fields”, 2000 (UM);

(5) Eric Freeman, “Quadratic and cubic Diophantine inequalities”, 1999 (UM);

(4) Scott Parsell, “Exponential sums and Diophantine problems”, 1999 (UM);

(3) Joel Wisdom, “On the representation of numbers as sums of powers”, 1998 (UM);

(2) Greg Martin (joint with H. L. Montgomery), “The distribution of prime primitive roots, and dense Egyptian fractions”, 1997 (UM);

(1) Morley Davidson, “On Waring's Problem in Algebraic Number Fields”, 1995 (UM).

Also 1-year visiting graduate students Yu-Ru Liu (at Michigan) and Bin Wei (at Bristol).

Undergraduate Research Students, Student Projects, etc

At Purdue University: Brian Morton (2021).

At University of Bristol: Prathan Jarupoonphol (Msci, 2016), Karl Bushel (20cp, 2015), Gareth Liles (20cp, 2015), William Whiting (10cp, 2015), Daniel Woods (30cp, 2015), Gail Bowen (30cp, 2013), Hannah Cooper (20cp, 2013), Joe Murfin (30cp, 2013), Darren Whitby (20cp, 2012), Jonathan Tinner (40cp, 2012), Zoe Rolfe (20cp, 2011), Georgina Wadcock (10cp, 2010), Rachel O'Connell (30cp, 2009), Gordon Forbes (20cp, 2009).

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At University of Michigan: A. Johnson (2001), H. Doorn (2000), R. Easton (2000), C. Balwe (1999), M. Powell (1999), Doug Covert (1996), W. Y. Tsui (1995), J. Nunez (1994; NSF Minority Mentoring), K. Soundararajan (1994), F. Javier Marquez (1993; SROP), Alexandra Thiry (1992), Eric Babe (1992), Brian Ewald (1992);

2002, Visiting graduate student Yu Ru Liu (from Harvard) (she visited for the Fall semester under my supervision);
1995, Undergraduate Thesis: Kannan Soundararajan (awarded AMS-MAA-SIAM Morgan Prize for Outstanding Research in Mathematics by an Undergraduate Student);
1994, Visiting graduate student, Chris Skinner (from Princeton), NSF Minority Graduate Fellow, J. Nunez;
1993, Special Research Opportunity Program: F. J. Marquez, and graduating undergraduate Chris Skinner.

Courses Taught:

At Purdue University:

Spring 2025:	Introduction to Number Theory (*undergraduate topics class Math 49500 / Math 59500, 19 students*)
Fall 2024:	Analytic Theory of Function Fields (*graduate topics class Math 59500, 14 students*)
Spring 2024:	Galois Theory (*undergraduate honors class Math 45401, 8 students*)
Fall 2023:	Introduction to Number Theory (*undergraduate topics class Math 49500 / Math 59500, 7 students*)
Spring 2023:	Analytic Number Theory: introduction to the circle method and its application (*graduate topics class Math 59800, 10 students + 3 attendees*)
Fall 2022:	Honors Algebra (*undergraduate honors class Math 45000, 18 students*)
Spring 2022:	Galois Theory (*undergraduate honors class Math 45401, 11 students*)
Fall 2021:	Introduction to Mathematical Analysis (*graduate class Math 50400, 37 students*)
Spring 2021:	Analytic Number Theory: a second course (*graduate topics class Math 59800, 8 students*)
Fall 2020:	Analytic Number Theory: a first course (*graduate topics class Math 59800, 16 students*)
Spring 2020:	Arithmetic Harmonic Analysis: an introduction to the circle method (*graduate topics class Math 59800, ~10 students*)

Graduate reading classes Math 59800:

Spring 2025	Multiplicative Number Theory (*1 student*)
Spring 2024	Analytic theory of Diophantine equations (*1 student*)
	Function fields (*1 student*)
Fall 2023	Theory of sieves (*5 students*)
Spring 2022	Weighted homogeneous polynomials (*1 student*)
	Primes with restricted digits (*1 student*)
Fall 2021	Pretentious number theory *(3 students)*
Summer 2021	Waring's problem with mixed powers *(1 student)*
	Weighted homogeneous Diophantine equations *(1 student)*
Spring 2021	Diophantine equations in many variables (*1 student*)
	Gowers norms (*1 student*)
Fall 2020:	p-adic numbers and Diophantine equations (*1 student*)
	Diophantine approximation (*1 student*)
Summer 2020:	Asymptotic formula in Waring's problem (*1 student*)
Spring 2020:	Efficient Congruencing (*1 student*)

At University of Bristol:

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Galois Theory *(for 4th year undergraduates, ~15-30 students);*
Number Theory (*for 3rd year undergraduates, ~55-100 students*);
Introduction to the circle method in function fields (one-off graduate course);
Vinogradov's mean value theorem (one-off graduate course);
Nested efficient congruencing and Vinogradov's mean value theorem, ESTIA Graduate Course

At Harvard University:
Analytic methods for Diophantine problems (Math 258x).

At University of Michigan:
Calculus 115 (1st semester calculus for 35-45 students);
Differential equations 216 (for engineers, ~90-120 students);
Linear Algebra 217 (for math majors, ~25 students);
Abstract Algebra 412 (for math majors, ~20-25 students);
Advanced Calculus 451 (for math majors, ~20-25 students);

Coding Theory 567 (introduction to error-correcting codes, from van Lint, for honors students and graduate students, ~15-20 students);
Number Theory 575 (for honors students and graduate students, ~10-20 students);
Analytic Number Theory 675;
Diophantine Problems 677 (Including Diophantine approximation and transcendence);
Modular forms 678;
Topics in Analytic Number Theory 775 (Introduction to the circle method);
Topics in Diophantine Problems 777 (Including Introduction to p-adic solubility problems, and Arithmetic Harmonic Analysis).

Organisation of Scientific Meetings

2025 Co-organiser: *Analytic Number Theory*, Oberwolfach Mathematical Institute, Germany, November 2-7, 2025;
2022 Co-organiser: *Analytic Number Theory*, Oberwolfach Mathematical Institute, Germany, November 6-12, 2022;
2021 Co-organiser: *Arithmetic statistics, discrete restriction, and Fourier analysis*, American Institute of Mathematics Online Workshop, February 15-19, 2021;
2019 Co-organiser: *Analytic Number Theory*, Oberwolfach Mathematical Institute, Germany, November 4-8, 2019;
2019 Co-organiser: *Efficient congruencing and decoupling,* 17-21 June, 2019, Focused Research Group at Bristol funded by Heilbronn Institute and ERC;
2017 Co-organiser: *Unlikely Intersections, Heights, and Efficient Congruencing,* January – June, 2017, Fields Institute, Toronto;
2017 Co-organiser: *Efficient congruencing and translation-invariant systems,* March 13 – 17, 2017;
2016 Co-organiser: *Analytic Number Theory*, Oberwolfach Mathematical Institute, Germany;
2014 Co-organiser: *Number fields and Function Fields: coalescences, contrasts and emerging applications*, Royal Society Chicheley Hall Conference Centre, Buckinghamshire, UK;
2013 Co-organiser: *Analytic Number Theory*, Oberwolfach Mathematical Institute, Germany;
2012 Co-organiser: *Analytic Methods for Diophantine Problems*, Göttingen, Germany;
2009 Organiser: *Heilbronn Centenary Conference,* Bristol, UK;
2008 Co-organiser: *Conference on Additive Combinatorics, Number Theory and Harmonic Analysis*, Fields Institute, Toronto, Canada;
2006 Co-organiser: *Diophantine Equations and Related Topics*, Banff International Research Station, Alberta, Canada;
2005 Co-organiser: *Analytic Number Theory*, Graduate School at Zhejiang University, Hangzhou, China.

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Invited conference and seminar talks

"A couple of experiences between AI and Number Theory", Workshop on AI in Number Theory, American Institute of Mathematics, CalTech, Pasadena, 29 May 2026.

"Aspects of exponential sums and their mean values", series of 4 lectures at the Simons School on Discrete Harmonic Analysis and Analytic Number Theory, Erdos Centre, Alfred Renyi Institute, Budapest, Hungary, 11-15 May, 2026.

"Weyl, subconvex L^p-sets, and arithmetic functions", Colloquium, Department of Mathematics, Towson University, Baltimore, MD, 29 April 2026.

"Beyond translation-invariance in arithmetic harmonic analysis", Colloquium, Department of Mathematics, Rutgers U., New Brunswick, NJ, 1 April 2026.

"Beyond translation-invariance in arithmetic harmonic analysis", Member's Colloquium, School of Mathematics, Institute for Advanced Study, Princeton, NJ, 1 March 2026.

"Weyl, equidistribution, and subconvex L^p-sets for p<2", Philadelphia Area Number Theory Seminar, Temple University, Philadelphia, 25 February 2026.

"Weyl, equidistribution, and subconvex L^p-sets for p<2", Joint Columbia-CUNY-NYU Number Theory Seminar, New York, 4 December 2025.

"Optimal mean value estimates and function field arithmetic", Number Theory Seminar, University of Washington, Seattle, 2 December 2025.

"Equidistribution, Weyl sums, and subconvex L^p-sets", Special Session on Analytic Number Theory and Related Topics, 40-minute talk, Fall Western Sectional AMS Meeting, Denver, 24 August 2025.

"Subconvex L^p sets, Weyl's inequality, and equidistribution", Oberwolfach Workshop on Real Analysis, Harmonic Analysis, and Applications, Oberwolfach, Germany, 17th July 2025.

"L^p-sets, Weyl's inequality, and the circle method", Full circle: 100 years of the circle method, Institut Mittag-Leffler, Djursholm, Sweden, 7th July 2025.

"Equidistribution and L^p-sets for p<2", Twenty-third Annual Workshop on Combinatorial and Additive Number Theory (CANT25), CUNY Graduate Center, New York (on-line via zoom), 21st May 2025.

"On the paucity of knowledge concerning Weyl sums and their mean values", The Next Horizon: Workshop on Open Problems in Harmonic Analysis and Analytic Number Theory, Hausdorff Institute, Bonn, Germany, May 1, 2025.

"The music of Diophantine equations – harmony or cacophony?", Hovde Distinguished Lecture, April 8, 2025, Purdue University.

"Optimal mean value estimates and function field arithmetic", Boston College – MIT Number Theory Seminar, Boston College, Boston, April 1, 2025.

"Waring's problems and its relatives", Plenary Speaker, 2024 Canadian Mathematical Society Winter Meeting, Vancouver, BC, Canada, December 2, 2024.

"Smooth values of polynomials and superirreducibility", Invited Speaker, Special session: Celebrating Greg Martin: A Chorus of Contributions to Analytic Number Theory, 2024 Canadian Mathematical Society Winter Meeting, Vancouver, BC, Canada, December 1, 2024.

"Unrepresentation theory and sums of powers", Twenty-second Annual Workshop on Combinatorial and Additive Number Theory (CANT24), CUNY Graduate Center, New York (on-line via zoom), 23rd May 2024.

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“Representations and unrepresentations by sums of powers”, Stanford Joint Analytic Number Theory Seminar, Stanford (on-line via zoom), 22nd May 2024.

“Representations by sums of powers”, Institut Mittag-Leffler, Djursholm, Sweden, March 11-15, 2024.

“Primes as sums of k-th powers, and Freiman’s theorem”, FRG Grad Seminar, zoom, 29 January 2024.

"Waring's problem and the story of 13,792", Undergraduate Math Club Talk, Purdue University, 25 October, 2023

"Waring's problem and its relatives", Colloquium, Pennsylvania State University, 19 October, 2023

"Beyond Vinogradov's mean value theorem", Algebra and Number Theory Seminar, Pennsylvania State University, 19 October, 2023

"Superirreducibility", PANTHA (Purdue Analytic Number Theory and Harmonic Analysis) Seminar, Purdue University, 11 October, 2023

"Beyond Vinogradov's mean value theorem", RHB70: Analytic Number Theory and Its Interfaces (70th birthday of Roger Heath-Brown), Oxford, 10-14 July, 2023

"On Waring's problem: beyond Freiman's theorem", Twenty-first Annual Conference on Combinatorial and Additive Number Theory (CANT23), CUNY Graduate Center, New York (on-line via zoom), 24th May 2023;

"On Waring's problem: beyond Freiman's theorem", Number Theory Seminar, University of Waterloo, Ontario, 21st March 2023

"On Waring's problem: beyond Freiman's theorem", Southern Regional Number Theory Conference, LSU, Baton Rouge, LA, 11th March 2023

"Waring's problem", Number Theory Web Seminar, 17th November 2022 (200 participant audience members recorded)

"Subconvexity in twisted mean values of exponential sums", Specialisation and effectiveness in number theory, Banff, Alberta, 28th August - 2nd September 2022;

Invited Speaker, Conference celebrating 200 years of Fourier Analysis, ICMS, Edinburgh, 27th June - 1st July 2022 (withdrew owing to US visa constraints);

"Shifted analogues of the divisor function", Twentieth Annual Conference on Combinatorial and Additive Number Theory (CANT22), CUNY Graduate Center, New York (on-line via zoom), 24th May 2022;

"Subconvexity in the inhomogeneous cubic Vinogradov system", 2022 Spring Central Sectional Meeting of the American Mathematical Society, 26-27 March 2022;

"Paucity problems and some relatives of Vinogradov's mean value theorem", Memorial conference on analytic number theory and applications dedicated to the 130th anniversary of academician I. M. Vinogradov, Moscow (on-line via zoom), 13-17 September 2021;

"Paucity problems and some relatives of Vinogradov's mean value theorem", (self-invited) PANTHA (Purdue Analytic Number Theory and Harmonic Analysis) Seminar, Purdue University, 25 August 2021;

"My PhD (thesis) problem", Goettingen-Hannover Number Theory Workshop, Goettingen, Germany (on-line via zoom), 14th June 2021;

"Efficient Congruencing: inductive application of linearity in Henselian fields", Lecture series (3 hours), Arithmetic (and) Harmonic Analysis, Institut Mittag Leffler, Stockholm, Sweden (on-line via zoom), 31st May - 4th June, 2021;

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"Rudin, polynomials, and nested efficient congruencing", Nineteenth Annual Conference on Combinatorial and Additive Number Theory (CANT21: Zoom Conference), CUNY Graduate Center, New York (on-line via zoom), 24th May 2021;

"Rudin, polynomials, and nested efficient congruencing", Number Theory Seminar, University of Mississippi (on-line via zoom), 8th April 2021;

"Subconvexity in the circle method via (the absence of) translation-dilation invariance", Special session on Analytic Number Theory, AMS Eastern Meeting via Zoom at Pennsylvania State University, State College (on-line via zoom), 4th October 2020;

"Arithmetic stratification: a cubic example", FRG Workshop on Averages of L-functions, and Arithmetic Stratification, American Institute of Mathematics (on-line via zoom), 30th July 2020;

"Condensation and densification for sets of large diameter", CANT (Combinatorial and Additive Number Theory) 2020, Organisers Mel Nathanson, Kevin O'Bryant and Steve Miller, CUNY/ Zoom, 4th June 2020;

"Bracket quadratics, Hua's lemma and Vinogradov's mean value theorem", Number Theory Web Seminar (https://sites.google.com/view/ntwebseminar/home), Org. M. Bennett, A. Ostafe and P. Habegger, 28th May 2020;

"A diagonal cubic equation with a slice or two off", Canadian Math. Society Winter Meeting, Toronto, 8th December 2019;

"A diagonal cubic equation with a slice or two off", Princeton/IAS Number Theory Seminar, Institute for Advanced Study, Princeton, 24th October 2019;

“A certain octonary cubic form”, Linfoot Seminar, University of Bristol, 29 May 2019;

“A translation-invariant perspective on arithmetic (and) harmonic analysis”, Colloquium, Universität Göttingen, 17 January 2019;

“A translation-invariant perspective on arithmetic (and) harmonic analysis”, Colloquium, Purdue University, West Lafayette, Indiana, 4 December 2018;

“l^r-decoupling and efficient congruencing”, Geometric and analytic number theory, Universität Göttingen, 19-23 November 2018

“Modern developments in the circle method”, Royal Society meeting - Srinivasa Ramanujan: in celebration of the centenary of his election as FRS, London, 15-16 October 2018

“Efficient Congruencing as p-adic decoupling: an introduction to Vinogradov’s mean value theorem”, CMI-LMS Research School: New Trends in Analytic Number Theory 2018, Exeter, 13-17 August 2018

“Counting generic rational points on varieties”, Rational Points, Schiermonnikoog, Netherlands, 2-6 July, 2018

“Smooth values of polynomials”, Roman Number Theory Association Meeting, Roma Tre, 18-20 April, 2018

“Efficient congruencing as p-adic decoupling”, Analysis Seminar, Cardiff University, 5 February, 2018

“Nested efficient congruencing and relatives of Vinogradov’s mean value theorem”, Canadian Mathematical Society Winter Meeting, Waterloo, 10 December 2017.

“Smooth values of polynomials”, Distinguished Colloquium, University of Reading, 8 November 2017

“Smooth values of polynomials”, Number Theory Seminar, University of Oxford, 19 October 2017

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"Nested efficient congruencing and relatives of Vinogradov's mean value theorem", Invited speaker: Clay Workshop on Harmonic Analysis and Related Areas, Oxford, September 24-28, 2017;

"Relatives of Vinogradov's mean value theorem, and their Diophantine applications", Invited speaker: Diophantine Problems conference, Manchester, September 11 – 15, 2017;

"Mean values of exponential sums – beyond Vinogradov and translation invariance", Invited 1-hr speaker: Conference in Honour of Per Salberger's 60th Birthday, Göteborg, Sweden, July 17-19, 2017;

"Nested efficient congruencing and relatives of Vinogradov's mean value theorem", Invited plenary (1-hour) speaker: Journees Arithmetiques, Caen, France, 3-7 July, 2017;

"Nested efficient congruencing and (non) translation-dilation invariant systems", Workshop on recent developments in analytic number theory, MSRI, Berkeley, California, 5 May 2017;

"Efficient congruencing: the end of the beginning", Workshop on Efficient Congruencing and Translation-Invariant Systems, Fields Institute, Toronto, Ontario, 13 March 2017;

Graduate Mini-Course "Lost in Translation-Invariance? An introduction to Vinogradov's mean value theorem and efficient congruencing", 6 out of 9 hours, Fields Institute, Toronto, Ontario, March 2017;

"A translation-invariant perspective on arithmetic (and) harmonic analysis", Colloquium, University of Waterloo, Kitchener, Ontario, 27 February 2017;

"Subconvexity in certain Diophantine problems via the circle method", Number Theory Seminar, University of Warwick, 24 October, 2016;

"Subconvexity in certain Diophantine problems via the circle method", Number Theory Seminar, Royal Holloway University of London, 11 October, 2016;

"Subconvexity in certain Diophantine problems via the circle method", Geometry and Analytic Number Theory, Zürich, 12-15 September, 2016;

"Shorts in brief: exponential sums in short intervals and their applications", Elementary and analytic number theory, Strobl-am-Wolgangsee, Austria, 5-9 September, 2016;

"An introduction to the circle method" and "Arithmetic stratification", American Institute of Mathematics, San Jose, CA, September, 2016;

"Subconvexity in certain Diophantine problems via the circle method", Workshop in number theory and dynamics, Göteborg, Sweden, 18-19 August, 2016;

"Efficient congruencing for deficient systems", Bristol-Oxford 1-day Meeting, Oxford, 7th July, 2016;

"Subconvexity in certain Diophantine problems via the circle method", London Number Theory Seminar, King's College, London, 1st June, 2016;

"Subconvexity in certain Diophantine problems via the circle method", Number Theory Seminar, University of Oxford, 26th, May 2016;

"Some observations concerning Rational (Chain) Connectedness over non-algebraically closed fields", Workshop on rationality questions, University of Bristol, 7th January, 2016;

"Efficient congruencing, Fourier restriction theory, and Waring's problem", Canadian Math. Soc. Winter Meeting, Montreal, 6th December 2015;

Trevor D. Wooley – CV and list of publications (revised 19 October 2026)

"Restriction theory and perturbations of Weyl sums", Banff meeting Combinatorics meets Ergodic Theory, 23rd July, 2015;

"Diagonal hypersurfaces of small degree via efficient congruencing", Mittag-Leffler Institute meeting on Quantitative Arithmetic Geometry, 26th June, 2015;

"A translation-invariant perspective on arithmetic (and) harmonic analysis", Warwick Colloquium, 21st November, 2014;

"A translation-invariant perspective on arithmetic (and) harmonic analysis", Edinburgh Mathematical Society Annual General Meeting, 17th October, 2014;

"Vinogradov's mean value theorem and its associated restriction theory via efficient congruencing", Clay meeting on Analytic Number Theory, Oxford, 29th September, 2014;

"Exponential sums associated with approximately translation-invariant systems", Huxley Meeting, Cardiff, 17th September, 2014;

"Translation invariance, exponential sums, and Waring's problem", 45-minute Invited Lecture at International Congress of Mathematicians, Seoul, August 19th, 2014;

"Efficient congruencing and a Diophantine inequality of Bourgain and Demeter", ELEFANT Conference, Bonn, July 16th, 2014;

"Perturbations of Weyl sums, and uniform distribution modulo 1", Newton Institute Workshop on Groups, Numbers and Dynamics, July 3rd, 2014;

"Robust estimates for exponential sums in function fields", Chicheley Park meeting on Number fields and Function fields, May 29th, 2014;

"Exponential sums associated with translation-invariant systems", Durham Easter School course, March 31st – April 4th, 2014;

"The cubic case of the main conjecture in Vinogradov's mean value theorem", Number Theory Days, ETH Zürich, March 8-9th, 2014;

"Efficient congruencing and strongly diagonal behaviour", Fouvry 60th Birthday Conference, Luminy, France, June, 2013;

"Systems of diagonal cubic forms", Warwick meeting on Rational Points, Warwick, May 2013;

"Efficient congruencing and rational morphisms", Hausdorff Rational points meeting, Bonn, Germany, April 2013;

"Systems of diagonal cubic forms", Hausdorff Rational points meeting, Bonn, Germany, April 2013;

"Efficient congruencing and rational morphisms", Seminar, St. Etienne, France, December, 2012;

"Efficient congruencing and rational morphisms", Cohomological methods meeting, Zürich, Switzerland, October, 2012;

"Multigrade efficient congruencing and Vinogradov's mean value theorem", Heath-Brown 60th Birthday Conference, Oxford University, October, 2012;

Trevor D. Wooley – CV and list of publications (revised 19 October 2026)

"Vinogradov's mean value theorem and concentration in arithmetic progressions", Conference on Additive Combinatorics, Paris, France, July, 2012;

"Vinogradov's mean value theorem and efficient congruencing", Canadian Number Theory Association meeting, Lethbridge, Canada, June, 2012;

"Efficient congruencing and Waring's problem", Conference on Analytic Methods for Diophantine Problems, Göttingen, Germany, June, 2012;

"Vinogradov's mean value theorem and efficient congruencing", Colloquium, Princeton University, May, 2012;

"Vinogradov's mean value theorem and efficient congruencing", Seminar, Stanford University, April, 2012;

"Vinogradov's mean value theorem and efficient congruencing", Seminar, Shanghai Jiao Tong University, April, 2012;

"Progress on Waring's problem", Colloquium, Shanghai Jiao Tong University, April, 2012;

"Vinogradov's mean value theorem and efficient congruencing", Turan Memorial Conference, Budapest, Hungary, September, 2011;

"Vinogradov's mean value theorem and efficient congruencing", 6th China-Japan Conference on Number Theory, Shanghai, China, August, 2011;

"Vinogradov's mean value theorem and efficient congruencing", mini-course, Shandong University, Weihai, China, August, 2011;

"Vinogradov's mean value theorem and efficient congruencing", Seminar, Göttingen, Germany, 2nd May, 2011;

"Exponential sums of large degree: progress and applications", Colloquium, Technion, Haifa, Israel, 4th April, 2011;

"Vinogradov's mean value theorem and efficient congruencing", Heilbronn Seminar, University of Bristol, 16th March, 2011;

"Vinogradov's mean value theorem, function fields, and moduli spaces", London Number Theory seminar, University College London, 9th February 2011;

"Vinogradov's mean value theorem", Discrete Analysis Seminar, Isaac Newton Insitiute, Cambridge, 2nd February 2011;

"The Hardy-Littlewood method", Diophantine Problems, Ein Gedi, Israel, January, 2011;

"Vinogradov's mean value theorem via efficient congruencing", Chinese Academy of Sciences, Beijing, November 2010;

Hua Centenary Lecture: "Sums of powers and the power of counting: 240 years of Waring's problem", 2-hour lecture at the Chinese Academy of Sciences, Beijing, November 2010;

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"Vinogradov's mean value theorem in function fields", Workshop on exponential sums, ETH, Zürich, November 2010;

"Counting rational points: the circle method in function fields", 5-hour course in Summer School: Arithmetic Aspects of Rational Curves, Grenoble, France, 28th June - 2nd July, 2010;

"Waring's problem: combining the circle method with polynomial identities", Colloquium, Göteborg University, Göteborg, Sweden, 11th June, 2010;

"Rational points, Fermat hypersurfaces and mean values of Weyl sums'", Rational Points, Theory and Experiment, ETH Zürich, Switzerland, 27th May, 2010;

"The circle method: an introduction to arithmetic harmonic analysis", 3-hour minicourse, ETH Zürich, Switzerland, 18th and 20th May, 2010;

"Unrepresentation problems: the additive theory of exceptional sets", 135 minute course in Graduate School: Analytic Number Theory, Göttingen, Germany, April 6 – 10, 2010;

"Weyl sums and rational points", Workshop on Analytic Number Theory, Institute for Advanced Study, Princeton, New Jersey, 16th March, 2010;

"Counting integral solutions of diagonal equations", 21st Isidore and Hilda Dressler Lecture, Kansas State University, Manhattan, Kansas, 11th March, 2010;

"Relations between exceptional sets for additive problems", IPAM, UCLA, Los Angeles, November 2009;

"Weyl sums, their quasi-diagonal behaviour, and rational points", Journees Additives, Lille, July 2009;

"Rational points on complete intersections, and mean values of Weyl sums", Hausdorff Institute for Mathematics, Bonn, April 2009;

"Diophantine problems in function fields: an analytic persepctive", Hausdorff Institute for Mathematics, Bonn, 26th February 2009;

"Exceptional sets for Diophantine inequalities", Number Theory Seminar, University of Oxford, December 2008;

"Brauer diagonalisation and solving in solvable extensions", London Number Theory Study Group Seminar, Imperial College, London, December 2008;

"A singular approach to rational points on quintic hypersurfaces", London-Paris Number Theory Seminar, November 2008;

"Higher order asymptotic expansions in Waring's problem", One Day Meeting in Honour of Hooley's 80th Birthday, Cardiff, July 2008;

"Vinogradov's mean value theorem in function fields", Fifth China-Japan Conference on Number Theory, Osaka, Japan, July 2008;

"The circle method in function fields", Canadian Number Theory Association Meeting, July 2008;

Trevor D. Wooley – CV and list of publications (revised 19 October 2026)

"Tales of the wild Diophantine West: integral solutions of polynomial equations", Colloquium, University of Bath, May 2008;

"Waring's problem in function fields", British Mathematical Colloquium, York, March 2008;

"The circle method in function fields", Oberwolfach meeting on Analytic Number Theory, March 9–15 2008;

"A singular approach to rational points on quintic hypersurfaces", Fields Institute, Toronto, April 2008;

"The Hasse Principle for systems of diagonal cubic equations", Number Theory Seminar, Cambridge University, February 2008;

"The circle method in function fields", Géométrie arithmétique et variétés rationnelles, CIRM, Luminy, 3–7 December 2007;

"The circle method in function fields", Colloquium, University of Heidelberg, November 2007;

"Waring's problem, the declining exchange rate between small powers, and the story of 13,792", Bristol Mathematics Colloquium, 13th November 2007;

"A singular approach to rational points on quintic hypersurfaces", Royal Holloway University of London, October 2007;

"The circle method in function fields", Diophantine Equations Via Analytic Number Theory, Heilbronn Institute, July 2007;

"Waring's problem in function fields", Number Theory Seminar, Penn. State, February 2007;

"Waring's problem in function fields", Fourth China-Japan Conference on Number Theory, Weihai, China, August 2006;

"Waring's problem in function fields", Canadian Number Theory Association Meeting, Vancouver, June 2006;

"Integral points on families of hypersurfaces", Analytic Methods for Diophantine Equations, Invited Speaker, BIRS, Banff, Alberta, Canada, May 13-18, 2006;

"The circle method for quasi-linear problems after the work of Gowers", MSRI, Berkeley, April 25th, 2006;

"Variants of the circle method after the work of Gowers", Workshop on Additive Combinatorics, CRM, Montreal, April 6-12, 2006, Invited Speaker.

"Smooth numbers and the circle method", Workshop on The Anatomy of Integers, CRM, Montreal, March 13-17, 2006, Invited Speaker.

"The circle method counts for rational points" (2 lectures), Introductory Workshop on Rational and Integral Points on Higher Dimensional Varieties, MSRI, Berkeley, January 17, 18, 2006;

"The density of rational points on hypersurfaces", Diophantine Equations, Tata Institute for Fundamental Research, Mumbai, India, December 16-20, 2005;

Trevor D. Wooley – CV and list of publications (revised 19 October 2026)

"A tale of two cubics", Colloquium, University of Waterloo, Ontario, November 22nd, 2005;

"Exceptional Sets", Graduate/Undergraduate Seminar, University of Waterloo, November 21st, 2005.

"The density of rational points on large dimensional hypersurfaces", Front Range Number Theory Colloquium, University of Wyoming, Laramie, November 15th, 2005;

"A tale of two cubics", Kempner Colloquium, University of Colorado, Boulder, October 2005;

"The Hardy-Littlewood Method" (3 lectures), Hangzhou Summer School, China, August 1-15, 2005;

"The density of rational points on algebraic varieties", Gauss-Dirichlet Conference, Göttingen, Germany, June 20th-24th, 2005;

"A tale of two cubics", South East Regional Meeting on Numbers, Columbia, South Carolina, April 15-17, 2005;

"Arithmetic Variants of the inequalities of Bessel and Hausdorff-Young", Canadian Number Theory Association Meeting, Toronto, June 2004;

"Weyl sums and additive number theory", New York Number Theory Seminar, May 2003;

"The circle method", Rational and integral points on higher dimensional varieties, American Institute of Mathematics, Palo Alto, CA, December 2002;

"Diophantine methods for exponential sums, and exponential sums for Diophantine problems", 45-minute invited talk, International Congress of Mathematicians, Beijing, China, August 2002;

"Arithmetic variants of Bessel's inequality", Satellite Conference in Number Theory and Arithmetic Geometry, Weihai, China, August 2002;

"Slim exceptional sets for stout representation problems", Max Planck Institute for Mathematics, Bonn, June 2002;

"The solution of Waring's problem for fourth powers", Colloquium, Universität Stuttgart, June 2002;

"Slim exceptional sets for stout representation problems", Canadian Number Theory Association Conference, Montreal, May 2002;

"The Bentkus-Götze-Freeman variant of the Davenport-Heilbronn method", series of 4 instructional lectures, Max Planck Institute for Mathematics, Bonn, February 2002;

"The density of rational points on Mazur's abc-equation, and arithmetic stratification", Number Theory Seminar, Max Planck Institute for Mathematics, Bonn, January 2002;

"Vu's thin basis theorem in Waring's problem", AMS special session, "Diophantine Problems", Williamstown MA, September 2001;

"Slim exceptional sets in Waring's problem", Fifth Pacific Northwest Number Theory Conference, Digipen/Microsoft, Redmond, Washington, April 2001;

"Slim exceptional sets in Waring's problem'", Special Session on Analytic Number Theory, AMS sectional meeting, Toronto, September 2000;

Trevor D. Wooley – CV and list of publications (revised 19 October 2026)

"Slim exceptional sets in Waring's problem", Meeting on "Analytic Number Theory", Luminy, September 2000;

"Higher moments in the life of Waring's problem", Millenial Conference on Number Theory, Urbana, IL, May 2000;

Colloquium, "Sums of fourth powers: the revival of polynomial identities in Waring's problem", Penn. State, March 2000;

"Slim exceptional sets in Waring's problem", Penn. State, March 2000;

"Exponential sums over binary forms", Meigaku Seminar, Tokyo, Japan, March 2000;

"Diophantine problems involving binary forms", Meeting on "Rational Points", Luminy, October 1999;

Plenary (1 hour) talk: "Progress in additive number theory: the unexpected afterlife of classical ideas", Journees Arithmetiques, Rome, July 1999;

Plenary (1 hour) talk: "Waring's problem for biquadrates", 1999 Canadian Number Theory Association meeting, Winnipeg, Manitoba, Canada, June 20-24, 1999;

"Why Fourier analysis counts for Diophantine problems", Packard Fellows meeting 1998, Santa Fe, NM, September 1998.

"Analytic methods count for Diophantine problems", AMS invited 1 hr address, March 1999, Urbana, Illinois;

"Exponential sums and Diophantine problems in many variables", invited talk, Number Theory Day, Universität für Bodenkultur, Wien (Vienna), Austria, June 1998;

"Diophantine problems in many variables", Colloquium, Universität Basel, Switzerland, July, 1998;

"Diophantine problems in many variables", Colloquium, Universität Stuttgart, Germany, June 1998;

"An explicit version of Brauer's theorem", Number Theory Seminar, Universität Stuttgart, Germany, June 1998;

"Local solubility of additive equations", Number Theory Seminar, Universität Stuttgart, Germany, May 1998;

Plenary: "Additive problems involving binary forms", 1998 Illinois Number Theory Conference, April 3-4, 1998, Northern Illinois University, De Kalb, Illinois;

"Exponential sums over binary forms", Elementare und Analytische Zahlentheorie, Oberwolfach, March 1998;

Graduate Colloquium series, Northern Illinois University, De Kalb, Illinois: "Sums of powers of integers: an overview of Waring's problem" and "Arithmetical terra incognita: tales of Diophantine problems in many variables", February, 1998;

Colloquium, "Diophantine problems in many variables", University of Illinois at Urbana-Champaign, Illinois, December 4, 1997.

Trevor D. Wooley – CV and list of publications (revised 19 October 2026)

“On the solubility of Diophantine equations in many variables, and new estimates for exponential sums", Columbia Number Theory Seminar, Columbia University, New York, December 1, 1997.

“On the solubility of Diophantine equations in many variables, and new estimates for exponential sums”, Princeton-IAS-Rutgers Harmonic Analysis and Number Theory Seminar, Institute for Advanced Study, Princeton, October 30, 1997.

“Estimating exceptional sets for additive representations in sparse sequences”, New York Number Theory Seminar, CUNY Graduate Center, New York, October 9, 1997.

“Diophantine Problems in Many Variables: the Role of Additive Number Theory”, Topics in Number Theory, July 30-August 3, 1997, Pennsylvania State University;

“The addition of binary cubic forms", Special Session on Number Theory (organised by Peter Sarnak and Arnold Knopfmacher), Joint American Math. Soc. / London Math. Soc. / South African Math. Soc. Meeting held at the University of Pretoria, Pretoria, South Africa, June 26-28, 1997.

“Sums of two squares in short intervals”, Number Theory Day held at the Centre for Applicable Analysis and Number Theory, University of Witwatersrand, Johannesburg, South Africa, June 25, 1997.

“Sums of two squares in short intervals”, Illinois Number Theory Conference, Urbana, April 1997.

“Forms in Many Variables”, International Conference on Analytic Number Theory, Research Institute for Mathematical Sciences, Kyoto, Japan, May 1996;

“Breaking classical convexity in Waring's problem: recent developments”, Oberwolfach meeting on Diophantine Approximation and Analytic Number Theory, March, 1996;

“A special case of Vinogradov's mean value theorem, and several applications”, Mathematical Institute of the Hungarian Academy of Sciences, Budapest, March 1996;

“Recent progress on paucity”, Symposium on Sieve Methods, Exponential Sums and their Applications in Number Theory (in honour of C. Hooley), Cardiff, July 1995;

“On the local solubility of additive equations”, Finite Fields and Their Applications, Glasgow, July 1995;

“Sums of two kth powers”, International Conference on Analytic Number Theory (in honor of Heini Halberstam), Allerton Park, Illinois, May 1995;

“Breaking classical convexity in Waring's Problem”, AMS Meeting, Stillwater, Oklahoma, Special session in Analytic Number Theory, October 1994;

“Breaking convexity in Waring's problem”, Conference in Honor of Wolfgang M. Schmidt, June 1994;

“On the local solubility of additive equations”, Illinois Number Theory Meeting, April 1994;

“On a certain nonary cubic form, and quasi-Hardy-Littlewood varieties”, University of Georgia, Athens, Number Theory Seminar, February 1994;

Trevor D. Wooley – CV and list of publications (revised 19 October 2026)

“Diophantine equations in many variables: some new perspectives on old problems”, Wayne State University, Detroit, Colloquium, February 1994;

“New estimates for smooth Weyl sums”, AMS Meeting, De Kalb, Illinois, Special session in Analytic Number Theory, May 1993;

“On a new method and its applications to certain local solubility problems”, University of Sheffield, April 1993;

“Equations over finite fields”, Isaac Newton Institute, University of Cambridge, Workshop on L-functions and classical problems, April 1993;

“On a new method and its applications to certain local solubility problems”, Isaac Newton Institute, University of Cambridge, March 1993;

“Bounding the number of non-diagonal solutions of certain diagonal equations, and quasi-diagonal solubility”, Princeton / Rutgers / Institute for Advanced Study joint Number Theory Seminar, IAS, February 1993;

“Vinogradov's mean value theorem”, Sonderforschungsbereich 170: Analytic methods for Diophantine problems, Goettingen, Germany, September 1992;

“Vinogradov's mean value theorem”, Number Theory Day, Imperial College, London, June 1992;

“Bounds for exponential sums over smooth numbers”, University College Cardiff, Wales, Number Theory Seminar, June 1992;

“Remarks on Vinogradov's mean value theorem: asymptotic formulae”, Illinois Number Theory Conference, University of Illinois, Champaign-Urbana, April 1992;

“Progress on mean values of exponential sums”, Number Theory Seminar, University of Colorado, Boulder, November, 1991;

“Mean value theorems for exponential sums: simple methods for strong estimates, and complicated methods for weak estimates”, Colloquium, University of Colorado, Boulder, November 1991;

“A result on symmetric diagonal equations", Conference on The Markoff spectrum, Diophantine approximation and analytic number theory, Brigham Young University, Provo, Utah, May 1991;

“Vinogradov's mean value theorem”, Institute for Advanced Study, Princeton, Analytic Number Theory Seminar, May 1991;

“Further applications of exponential sums over smooth numbers”, Institute for Advanced Study, Princeton, Analytic Number Theory Seminar, February 1991;

“On simultaneous symmetric diagonal equations (and applications)”, University of Illinois, Urbana-Champaign, January 1991;

“Vinogradov's mean value theorem”, Western Number Theory Conference, Asilomar, California, December 1990;

Trevor D. Wooley – CV and list of publications (revised 19 October 2026)

“Progress in Waring's problem”, Brigham Young University, Provo, Number Theory Seminar, December 1990;

“Vinogradov's mean value theorem”, University of Michigan, Ann Arbor, Number Theory Seminar, December 1990;

“Recent progress in Waring's problem, and related topics”, Nottingham Pure Mathematics Colloquium, June 1990;

“Large improvements in Waring's problem”, Analytic Number Theory Conference (in honour of Heini Halberstam), Imperial College, June 1st, 1990;

"On a problem related to one of Littlewood and Offord", Pure Mathematics Colloquium, Imperial College, April, 1990;

“On simultaneous additive equations, and the new iterative method”, Royal Holloway University of London, April 1990.

Trevor D. Wooley – CV and list of publications (revised 19 October 2026)

List of Publications: Trevor D. Wooley

[176] T. D. Wooley, Efficient congruencing in Z[t] modulo t^2, submitted, 55pp.

[175] T. D. Wooley, *Sharp mean value estimates in the absence of translation-dilation invariance*, submitted, 13pp.; arXiv:2610.05525.

[174] T. D. Wooley, *The main conjecture for a Vinogradov subsystem*, submitted, 11pp.

[173] J. Champagne, Z. Ge, T. H. Le, Y.-R. Liu and T. D. Wooley, *Equidistribution of polynomial sequences in function fields: resolution of a conjecture*, submitted, 17pp; arXiv:2512.16118.

[172] J. Brandes and T. D. Wooley, *Structure and paucity in affine diagonal systems, I*, Bull. London Math. Soc., accepted, to appear, 17pp; arXiv:2602.02911.

[171] T. D. Wooley, *Strong paucity in the Brudern-Robert Diophantine system*, Quart. J. Math., accepted, to appear, 14pp; arXiv:2601.05121, doi.org/10.1093/qmath/haag025.

[170] T. D. Wooley, *Subconvex L^p-sets, Weyl's inequality, and equidistribution*, J. Inst. Math. Jussieu **25** (2026), no. 5, 2919--2959; arXiv:2508.13384, doi.org/10.1017/S1474748026101935.

[169] J. Bruedern and T. D. Wooley, *Partitio Numerorum: sums of a prime and a number of k-th powers*, J. Eur. Math. Soc. **28** (2026), no. 7, 2849--2875; arXiv:2211.10387, doi.org/10.4171/JEMS/1567.

[168] J. Champagne, T. H. Le, Y.-R. Liu and T. D. Wooley, *Well-distribution modulo one and the primes*, Proc. Amer. Math. Soc. **153** (2025), no. 12, 5069–5074; arXiv:2406.19491, https://doi.org/10.1090/proc/17364.

[167] T. D. Wooley, *Subconvexity and the Hilbert-Kamke problem*, Math. Z. **311** (2025), article no. 17, 14pp; arXiv:2201.02699, doi.org/10.1007/s00209-025-03812-9.

[166] T. H. Le, Y.-R. Liu and T. D. Wooley, *Equidistribution of polynomial sequences in function fields, with applications*, Adv. Math. **479** (2025), article no. 110424, 44pp, arXiv:1311.0892v2, https://doi.org/10.1016/j.aim.2025.110424.

[165] J. W. Bober, L. Du, D. Fretwell, G. S. Kopp and T. D. Wooley, *On 2-superirreducible polynomials over finite fields*, Indag. Math. (N.S.) **36** (2025), no. 3, 753--763; arXiv:2309.15304, https://doi.org/10.1016/j.indag.2024.08.005.

[164] J. Bruedern and T. D. Wooley, *Estimates for smooth Weyl sums on minor arcs*, Bull. London Math. Soc. **57** (2025), no. 3, 657–668; arXiv:2408.06441, doi.org/10.1112/blms.13219.

[163] T. D. Wooley, *Condensation and densification for sets of large diameter*, Combinatorial and Additive Number Theory VI -- CANT, New York, USA, 2022 and 2023, Ed. Melvyn B. Nathanson, Springer Proceedings in Mathematics and Statistics, 2025, pp. 461–502; arXiv:2305.19968, doi.org/10.1007/978-3-031-65064-2_22.

[162] J. Bruedern and T. D. Wooley, *Estimates for smooth Weyl sums on major arcs*, Internat. Math. Res. Notices **2024** (2024), no. 24, 14662--14688; arXiv:2405.18608, doi.org/10.1093/imrn/rnae252.

[161] J. Bruedern and T. D. Wooley, *Partitio Numerorum: sums of squares and higher powers*, Funct. Approx. Comment. Math. **71** (2024), no. 1, 21--67; arXiv:2402.09537, doi.org/10.7169/facm/2165.

[160] T. D. Wooley, *Rational lines on diagonal hypersurfaces and subconvexity via the circle method*, Trans. Amer. Math. Soc. **377** (2024), no. 3, 2125--2147; doi:10.1090/tran/9077, arXiv:2305.05071.

[159] J. Bruedern and T. D. Wooley, *On Waring's problem: beyond Freiman's theorem*, J. London Math. Soc. **109** (2024), no. 1, e12820, 25pp.; doi:10.1112/jlms.12820, arXiv:2302.12920.

[158] J. Bruedern and T. D. Wooley, *On Waring's problem for larger powers*, J. Reine Angew. Math. **805** (2023), 115--142; doi:10.1515/crelle-2023-0072, arXiv:2211.10380.

Trevor D. Wooley – CV and list of publications (revised 19 October 2026)

[157] J. Bruedern and T. D. Wooley, *Pairs of diagonal quartic forms: the asymptotic formulae*, Internat. Math. Res. Notices **2023** (2023), no. 18, 15928--15975; doi:10.1093/imrn/rnad021, arXiv:2211.10397.

[156] T. D. Wooley, *Paucity problems and some relatives of Vinogradov's mean value theorem*, Math. Proc. Cambridge Philos. Soc. **175** (2023), no. 2, 327--343; doi:10.1017/S0305004123000166, arXiv:2107.12238.

[155] T. D. Wooley, *The paucity problem for certain symmetric Diophantine equations*, Bull. Austral. Math. Soc. **108** (2023), no. 1, 29--39; doi:10.1017/S000497272200096X, arXiv:2211.10500.

[154] T. D. Wooley, *Finite abelian groups via congruences*, Amer. Math. Monthly **130** (2023), no. 5, 482--484; doi:10.1080/00029890.2023.2178221, arxiv:2211.10520.

[153] T. D. Wooley, *Subconvexity in inhomogeneous Vinogradov systems*, Quart. J. Math. **74** (2023), no. 1, 389--418; doi:10.1093/qmath/haac027, arXiv:2202.14003.

[152] J. Brüdern and T. D. Wooley, *Pairs of diagonal quartic forms: the non-singular Hasse principle*, Quart. J. Math. **74** (2023), no. 1, 101--128; doi:10.1093/qmath/haac019, arXiv:2110.04349.

[151] T. D. Wooley, *Subconvexity in the inhomogeneous cubic Vinogradov system*, J. London Math. Soc. **107** (2023), no. 2, 798--817; doi:10.1112/jlms.12698, arXiv:2202.05804.

[150] W. Heap, A. Sahay and T. D. Wooley, *A paucity problem associated with a shifted integer analogue of the divisor function,* J. Number Theory **242** (2023), 660–668.

[149] K. Hughes and T. D. Wooley, *Discrete restriction for (x,x^3) and related topics*, Internat. Math. Res. Notices **2022** (2022), no. 20, 15612--15631.

[148] J. Brüdern and T. D. Wooley, *A paucity problem for certain triples of diagonal equations*, Bull. London Math. Soc. **54** (2022), no. 4, 1396--1412.

[147] J. Brüdern and T. D. Wooley, *On smooth Weyl sums over biquadrates and Waring's problem*, Acta Arith. **204** (2022), no. 1, 19--40.

[146] J. Brandes and T. D. Wooley, *Optimal mean value estimates beyond Vinogradov's mean value theorem*, Acta Arith. **200** (2021), no. 2, 149--182.

[145] J. W. Bober, D. Fretwell, G. Martin and T. D. Wooley, *Smooth values of polynomials*, J. Austral. Math. Soc. **108** (2020), no. 2, 245--261.

[144] J. Brüdern and T. D. Wooley, *An instance where the major and minor arc integrals meet*, Bull. London Math. Soc. **51** (2019), no. 6, 1113--1128.

[143] T. D. Wooley, *Nested efficient congruencing and relatives of Vinogradov's mean value theorem*, Proc. London Math. Soc. (3) **118** (2019), no. 4, 942--1016.

[142] J. Brüdern and T. D. Wooley, *Arithmetic harmonic analysis for smooth quartic Weyl sums: three additive equations*, J. Eur. Math. Soc. **20** (2018), no. 10, 2333–2356.

[141] R. C. Vaughan and T. D. Wooley, *The asymptotic formula in Waring's problem: higher order expansions*, J. Reine Angew. Math. **742** (2018), 17--46.

[140] J. Brandes and T. D. Wooley, *Vinogradov systems with a slice off*, Mathematika **63** (2017), no. 3, 797--817.

[139] J. Brüdern and T. D. Wooley, *Additive representation in short intervals, II: sums of two like powers*, Math. Z. **286** (2017), no. 1-2, 179--196.

[138] A. V. Kumchev and T. D. Wooley, *On the Waring-Goldbach problem for seventh and higher powers*, Monatsh. Math. **183** (2017), no. 2, 303–310.

Trevor D. Wooley – CV and list of publications (revised 19 October 2026)

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