

Alexander Mieczyslaw Kasprzyk

PERSONAL INFORMATION	School of Mathematical Sciences University of Nottingham University Park Nottingham NG7 2RD United Kingdom	<i>Phone:</i> +44 (0)115 951 3839 <i>E-mail:</i> a.m.kasprzyk@nottingham.ac.uk <i>Web:</i> https://kasprzyk.work <i>ORCID:</i> 0000-0003-2340-5257
EMPLOYMENT	Associate Professor in Geometry University of Nottingham, UK Research Fellow Imperial College London, UK Research Fellow University of Sydney, Australia Postdoctoral Research Associate University of Kent, UK Postdoctoral Research Fellow University of New Brunswick, Canada	Aug 2015–present Jan 2011–Jul 2015 Nov 2009–Dec 2010 Oct 2008–Oct 2009 Sep 2006–Sep 2008
SECONDMENT	Office of the Chief Scientific Adviser Heilbronn Institute for Mathematical Research	Sep 2024–present Oct 2017–Sep 2019
CONSULTANCY	Heilbronn Institute for Mathematical Research Centre for Emerging Technology and Security	Sep 2019–present Jun 2023–Jan 2024
EDUCATION	University of Bath, UK Ph.D. in Mathematics University of Oxford, UK MMath in Mathematics	2002–2006 1998–2002
KEYWORDS	Algebraic Geometry; Computational Algebra; Machine Learning; Mirror Symmetry	
REFEREED PUBLICATIONS	Where relevant, the number of citations is included in [red] (data collected from Google Scholar). As of Sep 2024 my work (including preprints omitted here) has been cited over 1750 times.	
	(42) Mirror symmetry, Laurent inversion and the classification of \mathbb{Q} -Fano threefolds. [4] T. Coates, L. Heuberger, A. Kasprzyk, to appear in <i>Trans. LMS</i> (2024).	
	(41) On K-moduli of quartic threefolds. [1] H. Abban, I. Cheltsov, A. Kasprzyk, Y. Liu, A. Petracci, to appear in <i>Alg. Geom. (Compositio)</i> (2024).	
	(40) Machine learning detects terminal singularities. [2] T. Coates, A. Kasprzyk, S. Venziale, <i>Neural Information Processing Systems (NeurIPS)</i> (2024), 67183–67194.	
	(39) The Rapid Rise of Generative AI: Assessing risks to safety and security. [3] A. Janjeva, A. Harris, S. Mercer, A. Kasprzyk, A. Gausen, <i>Centre for Emerging Technology and Security</i> Research Report (2023).	
	(38) Machine learning the dimension of a Fano variety. [7] T. Coates, A. Kasprzyk, S. Venziale, <i>Nature Communications</i> 14 :5526 (2023).	
	(37) Computation and data in the classification of Fano varieties. [1] G. Brown, T. Coates, A. Corti, T. Ducat, L. Heuberger, A. Kasprzyk, <i>Nankai Symposium on Mathematical Dialogues</i> , Springer, 2023.	

- (36) Toric Sarkisov links of toric Fano varieties. [2]
G. Brown, J. Buczyński, A. Kasprzyk, *Birational Geometry, Kähler–Einstein Metrics and Degenerations*, Springer, 2023, 129–144.
- (35) Polytopes and machine learning. [32]
J. Bao, Y.-H. He, E. Hirst, J. Hofscheier, A. Kasprzyk, S. Majumder. *International Journal of Data Science in the Mathematical Sciences* **1**(2) (2023), 181–211.
- (34) Machine learning the dimension of a polytope. [2]
T. Coates, J. Hofscheier, A. Kasprzyk, *Machine Learning in Pure Mathematics and Theoretical Physics*, World Scientific, 2023, 85–104.
- (33) Singularity content. [41]
M. Akhtar, A. Kasprzyk, to appear in *Kyoto J. Math.* (2023).
- (32) Databases of quantum periods for Fano manifolds. [4]
T. Coates, A. Kasprzyk, *Nature Sci. Data* **9**:163 (2022).
- (31) On the maximum dual volume of a canonical Fano polytope. [11]
G. Ballelli, A. Kasprzyk, B. Nill, *Forum of Math., Sigma* **10** (2022), e109.
- (30) On the Fine interior of three-dimensional canonical Fano polytopes. [12]
V. Batyrev, A. Kasprzyk, K. Schaller, *Interactions with Lattice Polytopes*, Springer, 2022, 11–47.
- (29) Gorenstein formats, canonical and Calabi–Yau threefolds. [24]
G. Brown, A. Kasprzyk, L. Zhu, *Exp. Math.* **31**(1) (2022), 146–164.
- (28) Laurent polynomials in mirror symmetry: why and how? [2]
A. Kasprzyk, V. Przyjalkowski, *Proyecciones J. Math.* **41**(2) (2022), 481–515.
- (27) Hilbert series, machine learning, and applications to physics. [27]
J. Bao, Y.-H. He, E. Hirst, J. Hofscheier, A. Kasprzyk, S. Majumder, *Phys. Lett. B* **827**:136966 (2022).
- (26) Maximally mutable Laurent polynomials. [38]
T. Coates, A. Kasprzyk, G. Pitton, K. Tveiten, *Proceedings of the Royal Society A* **477**:20210584 (2021).
- (25) Quantum periods for certain four-dimensional Fano manifolds. [16]
T. Coates, S. Galkin, A. Kasprzyk, A. Strangeway, *Exp. Math.* **29**(2) (2020), 183–221.
- (24) Laurent inversion. [31]
T. Coates, A. Kasprzyk, T. Prince, *Pure Appl. Math. Q.* **15**(4) (2019), 1135–1179.
- (23) Appendix to Four dimensional Fano quiver flag zero loci. [20]
T. Coates, E. Kalashnikov, A. Kasprzyk, *Proceedings of the Royal Society A* **475**:20180791 (2019).
- (22) Ehrhart polynomial roots of reflexive polytopes. [15]
G. Hegedüs, A. Higashitani, A. Kasprzyk, *Electron. J. Combin.* **26**(1) (2019), P1.38.
- (21) Fano 3-folds in $\mathbb{P}^2 \times \mathbb{P}^2$ format, Tom and Jerry. [20]
G. Brown, A. Kasprzyk, M. Qureshi, *Eur. J. Math.* **4**(1) (2018), 57–72.
- (20) Minimality and mutation-equivalence of polygons. [39]
A. Kasprzyk, B. Nill, T. Prince, *Forum of Math., Sigma* **5** (2017), e18.
- (19) Mutations of fake weighted projective planes. [24]
M. Akhtar, A. Kasprzyk, *Proc. Edinburgh Math. Soc. (2)* **59**(2) (2016), 271–285.
- (18) Quantum periods for 3-dimensional Fano manifolds. [129]
T. Coates, A. Corti, S. Galkin, A. Kasprzyk, *Geom. Topol.* **20**(1) (2016), 103–256.
- (17) Mirror symmetry and the classification of orbifold del Pezzo surfaces. [82]
M. Akhtar, T. Coates, A. Corti, L. Heuberger, A. Kasprzyk, A. Oneto, A. Petracci, T. Prince, K. Tveiten, *Proc. Amer. Math. Soc.* **144** (2016), 513–527.
- (16) Four-dimensional projective orbifold hypersurfaces. [30]
G. Brown, A. Kasprzyk, *Exp. Math.* **25**(2) (2016), 176–193.

- (15) Four-dimensional Fano toric complete intersections. [39]
T. Coates, A. Kasprzyk, T. Prince, *Proceedings of the Royal Society A* **471**:20140704 (2015).
- (14) Mutations of fake weighted projective spaces. [1]
T. Coates, S. Gonshaw, A. Kasprzyk, N. Nabijou, *Electron. J. Combin.* **21**(4) (2014), P4.14.
- (13) Mirror symmetry and Fano manifolds. [149]
T. Coates, A. Corti, S. Galkin, V. Golyshev, A. Kasprzyk, *Proceedings of the 6th European Congress of Mathematics*, European Mathematical Society, 2013, 285–300.
- (12) Seven new champion linear codes. [19]
G. Brown, A. Kasprzyk, *LMS J. Comput. Math.* **16** (2013), 109–117.
- (11) Small polygons and toric codes. [20]
G. Brown, A. Kasprzyk, *J. Symbolic Comput.* **51** (2013), 55–62.
- (10) Fano polytopes. [44]
A. Kasprzyk, B. Nill, *Strings, Gauge Fields, and the Geometry Behind – The Legacy of Maximilian Kreuzer*, World Scientific, 2012, 349–364.
- (9) Minkowski polynomials and mutations. [127]
M. Akhtar, T. Coates, S. Galkin, A. Kasprzyk, *SIGMA Symmetry Integrability Geom. Methods Appl.* **8** (2012), 094, pp. 707.
- (8) Reflexive polytopes of higher index and the number 12. [21]
A. Kasprzyk, B. Nill, *Electron. J. Combin.* **19**(3) (2012), P9.
- (7) The boundary volume of a lattice polytope. [11]
G. Hegedüs, A. Kasprzyk, *Bull. Aust. Math. Soc.* **85** (2012), 84–104.
- (6) Roots of Ehrhart polynomials of smooth Fano polytopes. [10]
G. Hegedüs, A. Kasprzyk, *Discrete Comput. Geom.* **46**(3) (2011), 488–499.
- (5) Canonical toric Fano threefolds. [106]
A. Kasprzyk, *Canad. J. Math.* **62**(6) (2010), 1293–1309.
- (4) On the combinatorial classification of toric log del Pezzo surfaces. [44]
A. Kasprzyk, M. Kreuzer, B. Nill, *LMS J. Comput. Math.* **13** (2010), 33–46.
- (3) Bounds on fake weighted projective space. [62]
A. Kasprzyk, *Kodai Math. J.* **32** (2009), 197–208.
- (2) A note on palindromic δ -vectors for certain rational polytopes. [39]
M. Fiset, A. Kasprzyk, *Electron. J. Combin.* **15**(1) (2008), N18.
- (1) Toric Fano three-folds with terminal singularities. [78]
A. Kasprzyk, *Tohoku Math. J.* **58**(1) (2006), 101–121.

SCIENTIFIC SOFTWARE & DATABASES	(7) The Fano 3-fold database. [6] G. Brown, A. Kasprzyk, <i>Zenodo</i> (2022).	doi:10.5281/zenodo.5820338
	(6) Quantum periods for four-dimensional Fano manifolds. T. Coates, A. Kasprzyk, <i>Zenodo</i> (2021).	doi:10.5281/zenodo.5708307
	(5) PCAS: A Parallel Computational Algebra System. T. Coates, A. Kasprzyk, 2017–present.	https://www.pcas.xyz
	(4) The classification of toric canonical Fano 3-folds. [3] A. Kasprzyk, (2010).	doi:10.5281/zenodo.5866330
	(3) Convex polytopes and polyhedra. [3] G. Brown, A. Kasprzyk, (2009).	https://tinyurl.com/2p9cmuk9
	(2) Toric geometry. G. Brown, J. Buczyński, A. Kasprzyk, (2009).	https://tinyurl.com/bdww76mc
	(1) Graded Ring Database. [155] G. Brown, A. Kasprzyk, 2007–present.	http://www.grdb.co.uk

EDITED VOLUMES

(3) Angles of Geometry: Proceedings of the Nottingham Geometry Seminar.
L. Campo, J. Hofscheier, and A. Kasprzyk (eds), to appear, World Scientific, 2024.

(2) Recent developments in Algebraic Geometry.
H. Abban, G. Brown, A. Kasprzyk, and S. Mori (eds), London Mathematical Society Lecture Note Series, **478**, Cambridge University Press, 2022.

(1) Interactions with lattice polytopes.
A. Kasprzyk and B. Nill (eds), Springer Proceedings in Mathematics & Statistics, **386**, Springer, 2022.

JOURNAL EDITOR-IN-CHIEF

*Experimental Mathematics*2023–present

Publishes formal results in pure mathematics inspired by experimentation, conjectures suggested by experiments, and data supporting significant hypotheses.

JOURNAL EDITORIAL BOARD MEMBER

*Fundamental Journal of Mathematics and Applications*2023–present

Publishes original research articles, review articles, and survey articles with a focus on number theory, geometry, and topology.

*International Journal of Data Science in the Mathematical Sciences*2022–present

A highly interdisciplinary journal aimed at experimental mathematicians, both pure and applied, physicists, and data scientists, with a focus on machine learning.

*Enumerative Combinatorics and Applications*2021–present

Covers research in enumerative combinatorics, focussing on research resulting from the rich interplay between mathematics and theoretical physics.

*Experimental Results*2021–2023

An open access, open peer review journal providing a venue to publish all valid experimental findings, from all disciplines across STEM.

POLICY ADVICE

*Science in the Age of AI*2024

Contributed to a Royal Society report exploring how AI is transforming the methods and nature of scientific research.

*Offensive Cyber Working Group*Apr 2024–present

Member of the College of Experts

*Generative AI and National Security*Dec 2023

Centre for Emerging Technology and Security

*Global AI Safety Summit pre-Summit Royal Society Workshop*Oct 2023

Science x AI Safety: Horizon-scanning AI safety risks across scientific disciplines

*Global AI Safety Summit AI for Innovation*Oct 2023

Department for Science, Innovation and Technology

SELECTED GRANTS

Since 2016 I have been awarded over £1M in external funding. With the exception of the grant indicated by * below, all are externally funded. Several small grants totalling approx. £20K are omitted.

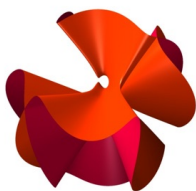
Project title	Role	Funder	Dates	Value
<i>Secondment</i> Office of the Chief Scientific Adviser	PI	MoD	Sep 2024– Aug 2026	£80K
<i>Computational Algebraic Geometry</i> INI Network Grant	Co-I	INI	Apr 2023– Mar 2025	£30K
<i>DANGER: Data, Numbers & Geometry</i> INI Network Grant	PI	INI	Jan 2023– Dec 2024	£15K
<i>PhD Sponsorship</i> Four-year PhD studentship	PI	GCHQ	Oct 2020– Aug 2024	£45K
<i>Constructing a Periodic Table for Geometry</i> Tübingen–Nottingham seedcorn*	PI	Tübingen & Nottingham	Sep 2021– Sep 2023	€24K
<i>Turing Network Development Award</i> ATI Network Funding	Co-I	ATI	Feb– Sep 2022	£40K

	<i>The Combinatorics of Mirror Symmetry</i> EPSRC Fellowship EP/N022513/1	PI	EPSRC	Jun 2016– Mar 2022	£551K
	<i>Algorithmic Methods in Algebraic Geometry</i> Nottingham–MAGMA collaboration	PI	University of Sydney	Apr 2018– Mar 2021	£240K
	<i>Secondment</i> Heilbronn Institute	PI	GCHQ	Oct 2017– Sep 2019	£53K
	<i>Computing toric Fano varieties</i> Atlantic Excellence Network Fellowship	PI	ACEnet	Oct 2007– Sep 2009	\$80K
POSTDOC SUPERVISION	Name	Dates			
	Johannes Hofscheier Progressed to Assistant Professor at the University of Nottingham.	2020–2022			
	Livia Campo Progressed to a JSPS Fellowship at Saga University, Japan, with O. Takuzo. Currently a postdoc at the University of Vienna, Austria, with B. Szendrői.	2020–2021			
	Giuseppe Pitton Progressed to a data science position at Deutsche Bank.	2018–2021			
	Michael Harrison Progressed to a software engineering position in industry.	2018–2021			
	Andrea Petracci Progressed to a postdoc at Freie Universität Berlin with K. Altmann. Currently Assistant Professor at the Università di Bologna, Italy.	2017–2019			
PHD SUPERVISION	Name	Dates			
	Sara Veneziale <i>Machine learning Fano varieties from the quantum period</i> Progressed to a Chapman–Schmidt Fellowship in AI for Science, Imperial College.	2021–2024			
	Girtrude Hamm <i>Growing classifications: widths, Ehrhart theory and spherical geometry</i> Part-funded by a HIMR studentship (£45K). Progressed to a postdoc at the University of Western Ontario, Canada, with G. Denham.	2020–2024			
	Thomas Hall <i>The combinatorics of lattice polytopes</i> Part-funded by a JSPS pre-doctoral research bursary (£42K).	2019–2024			
	Daniel Cavey <i>Mirror symmetry for orbifold del Pezzo surfaces</i> Progressed to a postdoc at the University of Lancaster with J. Evans. Currently an Assistant Professor at the University of Nottingham	2016–2019			
	Mohammad Akhtar <i>Mutations of Laurent polynomials and lattice polytopes</i> Progressed to a Hodge Fellowship at the IHÉS, France, with M. Kontsevich.	2011–2015			
INVITED SUMMER SCHOOLS & LECTURE SERIES	University of Oxford, UK <i>LMS Research School: Machine Learning in Mathematics and Theoretical Physics</i>	3–7 Jul 2023			
	Fraunhofer Institute for Industrial Mathematics, Germany <i>Computational Geometry</i>	28 Nov–1 Dec 2022			
	Kyoto University, Japan <i>Mirror Symmetry for Fano Manifolds and Related Topics</i>	10–14 Dec 2018			
	International Centre for Theoretical Physics (ICTP), Trieste, Italy <i>Advanced school on Moduli Spaces, Mirror Symmetry, and Enumerative Geometry</i>	1–12 Aug 2016			
	University of Catania, Italy <i>Pragmatic 2013: Summer School on Mirror Symmetry and Fano Manifolds</i>	16 Sep–4 Oct 2013			

ORGANISATION OF SEMINARS & CONFERENCES SINCE 2017	<i>Maths and AI: Challenges and Opportunities for Humanity</i>	6–10 Oct 2025
	ICMS, Edinburgh, UK	
	<i>DANGER 4: Data, Numbers, & Geometry</i>	8–9 Aug 2024
	London Institute for Mathematical Sciences, UK	
	<i>ICMS 2024: Machine Learning within Computer Algebra Systems</i>	22–25 Jul 2024
	Durham University, UK	
	<i>Computational Geometry</i>	23–28 Jun 2024
	Banff international Research Station (BIRS), Canada	
	<i>DANGER 3: Data, Numbers, & Geometry</i>	24–25 Aug 2023
	London Institute for Mathematical Sciences, UK	
	<i>Computational Algebraic Geometry Workshop</i>	27–31 Mar 2023
	University of Warwick, UK	
	<i>Online Machine Learning Seminar</i>	Feb 2023–present
	Online	
	<i>Computational Geometry</i>	29 Aug–2 Sep 2022
	University of Nottingham, UK	
	<i>DANGER 2: Data, Numbers, & Geometry</i>	25–26 Aug 2022
	<i>DANGER: Data, Numbers, & Geometry</i>	25–26 Aug 2021
	Online	
	<i>Fano varieties and Birational Geometry</i>	23–26 Feb 2021
	Online	
	<i>Sanya Workshop on Machine Learning in Geometry and Physics</i>	26–28 Jan 2021
	Tsinghua Sanya International Mathematics Forum, Shanghai	
	<i>COW/EmSG/GLEN Joint Summer School</i>	7–11 Sep 2020
	Online	
	<i>ICMS 2020: Databases in Mathematics</i>	13–16 Jul 2020
	Braunschweig, Germany	
	<i>Machine Learning in Algebraic Geometry</i>	Jun 2020
	University of Nottingham, UK	
	<i>Online Algebraic Geometry Seminar</i>	Apr 2020–present
	Online	
	<i>Lucia Geometrica: A Celebration of Geometry</i>	9–13 Dec 2019
	Stockholm University, Sweden	
	<i>Lattice polytopes, with a view towards Geometry and Applications</i>	18–20 Sep 2019
	ICMS, Edinburgh, UK	
	<i>Mutations: Mirror Symmetry, Deformations, and Combinatorics</i>	11–16 Aug 2019
	Banff international Research Station (BIRS), Canada	
	<i>Cluster algebras and algebraic geometry</i>	11–14 Jul 2018
	University of Nottingham, UK	
	<i>Interactions with Lattice Polytopes</i>	14–16 Sep 2017
	Otto-von-Guericke-Universität Magdeburg, Germany	
	<i>Experimental Classification of Fano Varieties</i>	16–18 Aug 2017
	Universität Tübingen, Germany	
	<i>Workshop on Computational Algebra</i>	18–21 Apr 2017
	King’s College, University of Cambridge, UK	

SELECTED INVITED TALKS SINCE 2010	Cortona, Italy	Sep 2025
	Workshop in honour of Alessio Corti	
	Institute for Computational and Experimental Research in Mathematics, Brown University, USA	Jul 2025
	LMFDB, Computation, and Number Theory	
	Royal Society, UK	Jun 2025
	Royal Society UK–Japan Frontiers of Science meeting	
	Seattle, USA	Jan 2025
	Joint Mathematical Meeting on Geometry and Machine Learning	
	Atlanta, USA	Oct 2024
	SIAM Conference on Algebraic Geometry and Machine Learning	
	University of Innsbruck, Austria	Oct 2024
	Group actions, combinatorial methods, and Fano varieties	
	Będlewo, Poland	Jul 2024
	Fano and uniruled varieties	
	Institution for Engineering and Technology, London	Apr 2024
	Centre for Emerging Technology and Security (CETaS) 2024 Showcase	
	TU Berlin, Germany	Feb 2024
	Discrete and Convex Geometry Seminar	
	New Orleans, USA	Dec 2023
	Conference on Neural Information Processing Systems (NeurIPS)	
	Schloss Dagstuhl, Germany	Oct 2023
	Automated mathematics: integrating proofs, algorithms and data	
	International Centre for Theoretical Physics (ICTP), Trieste, Italy	Sep 2023
	Workshop on Deformation Theory II	
	Technische Universität Berlin, Germany	Nov 2022
	MOM workshop on MaRDI, OSCAR and MATHREPO	
	San Diego, USA	Sep 2022
	SIAM Conference on Mathematics of Data Science	
	Boston University, USA	May 2022
	Big Data in Pure Mathematics	
	University of Connecticut, USA	Mar 2022
	Department Colloquium	
	Texas, USA	Aug 2021
	SIAM Conference on Algebraic Geometry	
	Chern Institute of Mathematics, China	Aug 2021
	Nankai Symposium on Mathematical Dialogues	
	Steklov Mathematical Institute, Russia	May 2020
	Iskovskikh Seminar Series	
	University of Torino, Italy	Feb 2020
	Algebraic Geometry – Torino 2020	
	Chicheley Hall, UK	Sep 2019
	3CinG Workshop	
	University of Warwick, UK	Oct 2018
	Classification, Computation, and Construction, New Methods in Geometry	
	Banach Center, Warsaw, Poland	Sep 2017
	Periods and Ricci flat manifolds	
	Museum of Science and Industry, Manchester, UK	Sep 2017
	Second Conference of Research Software Engineers	
	Universität Tübingen, Germany	Aug 2017
	Experimental Classification of Fano Varieties	
	Johannes Gutenberg-Universität Mainz, Germany	Mar 2017
	Cluster Algebras in Mathematical Physics	

	Freie Universität Berlin, Germany	Dec 2016
	Einstein workshop on Lattice Polytopes	
	Banff International Research Station, Canada	Mar 2016
	Homological Mirror Geometry	
	Hannover University, Germany	May 2015
	Experimental Methods in Computational Algebra	
	University of Ulm, Germany	Feb 2015
	Department Colloquium	
	Simons Center for Geometry and Physics, Stony Brook University, USA	Nov 2014
	Wall Crossing, Quantum Integrable Systems, and TQFT	
	Max Planck Institute for Mathematics, Bonn, Germany	Sep 2014
	Motivic Structures on Quantum Cohomology & Pencils of CY Motives	
	KTH Royal Institute of Technology, Stockholm, Sweden	Aug 2014
	Algebra & Geometry Seminar	
	Freie Universität Berlin, Germany	Jul 2014
	Combinatorics and Geometry Seminar	
	University of Vienna, Austria	Jun 2014
	Geometry and Mathematical Physics Seminar	
	Miami University, USA	Jan 2014
	Homological Mirror Symmetry	
	Colorado State University, USA	Aug 2013
	SIAM Conference on Applied Algebraic Geometry	
	TU Berlin, Germany	Aug 2012
	21st International Symposium on Mathematical Programming	
	Kyoto University, Japan	Jul 2012
	Convex Polytopes	
	British Mathematical Colloquium, UK	Apr 2012
	British Mathematical Colloquium: Number Theory and Algebraic Geometry	
	University of Sydney, Australia	Jan 2012
	Department Colloquium	
	Freie Universität Berlin, Germany	Dec 2011
	Extremal Laurent Polynomials and Fano Varieties	
	RICAM, Austrian Academy of Sciences, Linz, Austria	Apr 2011
	Colloquium	
	University of Sydney, Australia	Oct 2010
	Computational Algebra Seminar	
	Freie Universität Berlin, Germany	Jun 2010
	Combinatorics and Geometry Seminar	
EXTERNAL LEADERSHIP RESPONSIBILITIES	<i>EPSRC Strategic Advisory Team (SAT)</i>	Jan 2022–present
	One of 15 members of the EPSRC’s Mathematical Sciences SAT, developing future EPSRC strategy and shaping the research and training portfolios.	
	<i>Convenor for the LMS Continuing Professional Development Panel Sessions for Early Career Researchers</i>	Aug 2023–present
	<i>ATI Topology and Geometry of Data Interest Group Member</i>	Jan 2023–present
	<i>External Examiner, University of East Anglia</i>	Oct 2022–present
	<i>External Examiner, University of Bath</i>	Oct 2021–present
	<i>Mentor for the Society of Research Software Engineering</i>	Oct 2021–present
	<i>EPSRC Strategic Themes Workshop: Building a Secure and Resilient World</i>	May 2024

RESEARCH GRANT & OTHER ASSESSMENT PANELS	<i>EPSRC Prosperity Partnerships Prioritisation Panel</i>	Jul 2024
	<i>EPSRC Programme Grant Outline Panel</i>	Jun 2023
	<i>EPSRC Fellowship Interview Panel</i>	Jul 2022
	<i>EPSRC New Horizons Outline Panel</i>	Mar 2022
	<i>EPSRC Mathematics Prioritisation Panel</i>	Sep 2016, Nov 2020
	<i>German Research Foundation (DFG) Review Panel</i>	Mar 2021, Jun 2025
	<i>Athena SWAN Assessment Panel</i>	Jan 2021
OUTREACH & PUBLIC ENGAGEMENT	<i>La Recherche</i>	Oct 2024
	L'IA aide à classer les formes géométriques abstraites: “Briques de base de la géométrie, les variétés de Fano sont aussi des objets complexes et hétéroclites que les mathématiciens aimeraient classer pour mieux les comprendre...”	
	<i>New Scientist</i>	Oct 2023
	AI is helping mathematicians build a periodic table of shapes: “Mathematicians attempting to build a ‘periodic table’ of shapes have turned to artificial intelligence for help...”	
	<i>Popular Mechanics</i>	Oct 2023
	Mathematicians are close to building the perfect periodic table of shapes: “Just as molecules can be broken down into atoms, so too can mathematical shapes be broken down into more basic components...”	
	<i>Pint of Science</i>	May 2022
	Helped organise Nottingham’s contribution to the global Pint of Science festival.	
	<i>A periodic table of shapes</i>	2012–2015
	Collaborated with artist-in-residence Gemma Anderson-Tempini interpreting the mathematics of Fano varieties through print-making and sculpture.	
	<i>Physics World</i>	Mar 2011
	Nature’s building blocks brought to life: “The scientists are looking for shapes, known as ‘Fano varieties’, which are basic building blocks and cannot be broken down into simpler shapes...”	
	<i>New Scientist</i>	Feb 2011
	Atoms ripple in the periodic table of shapes: “This rippling structure may look like a piece of origami, or an intricate scarf. In fact, it is geometry’s answer to the atom...”	
	<i>Science</i>	Feb 2011
	Elementary mathematics: “An international group of mathematicians hopes to do for math what Dmitri Mendeleev’s periodic table did for chemistry...”	