

Oscar Randal-Williams

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- POSITIONS
- ◇ **University of Cambridge**, (October 2020 –)
Professor.
 - ◇ **University of Cambridge**, (October 2017 – 2020)
Reader.
 - ◇ **University of Cambridge**, (October 2013 – 2017)
Lecturer.
 - ◇ **King’s College, University of Cambridge**, (October 2012 – September 2017)
Research fellow (to September 2016), ordinary fellow (from September 2016).
 - ◇ **University of Cambridge**, (October 2012 – October 2013)
Herchel Smith postdoctoral research fellow.
 - ◇ **University of Copenhagen**, (September 2010 – September 2012)
Postdoctoral position and member of the Center for Symmetry and Deformation.
 - ◇ **Mathematical Institute, University of Oxford**, (January – August 2010)
EPSRC PhD Plus postdoctoral position.
 - ◇ **Jesus College, University of Oxford**, (October – December 2009)
Retained lecturer in Mathematics.
- EDUCATION
- ◇ **Jesus College, University of Oxford**, (2006 – 2009)
DPhil Mathematics, 2009.
Thesis title: *Stable moduli spaces of manifolds*. Supervisor: U. Tillmann.
 - ◇ **Jesus College, University of Oxford**, (2002 – 2006)
MMath Mathematics, First Class Honours.
- GRANTS
- ◇ Co-PI, DNRG Grant *Copenhagen center for Geometry and Topology*, ~ DKK 60 million.
 - ◇ ERC Starting Grant, 756444 (HToMS), €974,526.
 - ◇ EPSRC First Grant, EP/M027783/1, £90,898.
 - ◇ LMS Scheme 1 grant, £5,000 (with J. Giansiracusa).
- HONOURS
AND AWARDS
- ◇ Oberwolfach prize, 2019.
 - ◇ Dannie Heineman prize of the Akademie der Wissenschaften zu Göttingen, 2019.
 - ◇ Philip Leverhulme prize, 2017.
 - ◇ Whitehead prize of the London Mathematical Society, 2017.
 - ◇ Oxford University Senior Mathematical Prize, 2007.
- EDITORIAL
WORK
- ◇ *Journal of Topology*. Editor, 2018–
 - ◇ *Proceedings of the London Mathematical Society*. Managing editor, 2018–
 - ◇ *London Mathematical Society*. Editorial advisor, 2013–2018

- PUBLICATIONS O. Randal-Williams, *Tautological rings and stabilisation*.
Glasgow Mathematical Journal, to appear. arXiv:2006.13050.
- M. Krannich, A. Kupers, and O. Randal-Williams, *An \mathbf{HP}^2 -bundle over S^4 with non-trivial \hat{A} -genus*.
Comptes Rendus. Mathématique, to appear. arXiv:2007.15062.
- A. Kupers and O. Randal-Williams, *Framings of $W_{g,1}$* .
Quarterly Journal of Mathematics, to appear. arXiv:2007.00532.
- O. Randal-Williams, *Homology of Hurwitz spaces and the Cohen–Lenstra heuristic for function fields (after Ellenberg, Venkatesh, and Westerland)*.
Asterisque, to appear. arXiv:1906.07447.
- A. Kupers and O. Randal-Williams, *The cohomology of Torelli groups is algebraic*.
Forum of Mathematics, Sigma, **8** (2020), E64.
- M. Krannich and O. Randal-Williams, *Mapping class groups of simply connected high-dimensional manifolds need not be arithmetic*.
Comptes Rendus. Mathématique, Tome **358** (2020) no. 4, pp. 469-473.
- S. Galatius and O. Randal-Williams, *Operations on stable moduli spaces*.
Research in the Mathematical Sciences, **7** (2020), E9.
- A. Kupers and O. Randal-Williams, *On the cohomology of Torelli groups*.
Forum of Mathematics, Pi, **8** (2020), E7.
- F. Hebestreit, M. Land, W. Lück, and O. Randal-Williams, *A vanishing theorem for tautological classes of aspherical manifolds*.
Geometry & Topology, to appear. arXiv:1705.06232.
- S. Galatius and O. Randal-Williams, *Moduli spaces of manifolds: a user’s guide*.
chapter for “Handbook of Homotopy theory”, arXiv:1811.08151.
- S. Galatius, A. Kupers, and O. Randal-Williams, *E_2 -cells and mapping class groups*.
Institut des Hautes Études Scientifiques. Publications Mathématiques **130** (1) (2019) 1-61.
- J. Ebert and O. Randal-Williams, *Semi-simplicial spaces*.
Algebraic & Geometric Topology **19** (4) (2019) 2099-2150.
- J. Ebert and O. Randal-Williams, *Infinite loop spaces and positive scalar curvature in the presence of a fundamental group*.
Geometry & Topology **23** (2019) 1549-1610.
- B. Gripiaios, O. Randal-Williams, *Topology of Electroweak Vacua*.
Physics Letters B **782** (2018) 94-98.
- O. Randal-Williams, *Some phenomena in tautological rings of manifolds*.
Selecta Mathematica **24** (4) (2018) 3835-3873.
- O. Randal-Williams and N. Wahl, *Homological stability for automorphism groups*.
Advances in Mathematics **318** (2017) 534-626.
- S. Galatius and O. Randal-Williams, *Homological stability for moduli spaces of high dimensional manifolds. I*
Journal of the American Mathematical Society **31** (1) (2018) 215-268.
- O. Randal-Williams, *Cohomology of automorphism groups of free groups with twisted coefficients*.
Selecta Mathematica **24** (2) (2018) 1453-1478.
- S. Galatius and O. Randal-Williams, *Homological stability for moduli spaces of high dimensional manifolds. II*
Annals of Mathematics **186** (1) (2017) 127-204.

- B. Botvinnik, J. Ebert, and O. Randal-Williams, *Infinite loop spaces and positive scalar curvature*.
Inventiones mathematicae **209** (3) (2017), 749-835.
- O. Randal-Williams, *An upper bound for the pseudoisotopy stable range*.
Mathematische Annalen **368** (3) (2017), 1081-1094.
- S. Galatius, I. Grigoriev, and O. Randal-Williams, *Tautological rings for high dimensional manifolds*.
Compositio Mathematica **153** (4) (2017) 851-866.
- F. Cantero and O. Randal-Williams, *Homological stability for spaces of surfaces*.
Geometry & Topology **21** (2017) 1387-1467.
- S. Galatius and O. Randal-Williams, *Abelian quotients of mapping class groups of highly connected manifolds*.
Mathematische Annalen **365** (1) (2016) 857-879.
- O. Randal-Williams, *Resolutions of moduli spaces and homological stability*.
Journal of the European Mathematical Society **18** (2016) 1-81.
- J. Ebert and O. Randal-Williams, *Torelli spaces of high-dimensional manifolds*.
Journal of Topology **8** (1) (2015) 38-64.
- S. Galatius and O. Randal-Williams, *Stable moduli spaces of high dimensional manifolds*.
Acta Mathematica **212** (2014), no. 2, 257-377.
- S. Galatius and O. Randal-Williams, *Detecting and realising characteristic classes of manifold bundles*.
Algebraic Topology: Applications and New Directions (Stanford, CA, 2012), Contemp. Math.
- J. Ebert and O. Randal-Williams, *Generalised Miller-Morita-Mumford classes for block bundles and topological bundles*.
Algebraic & Geometric Topology **14** (2014) 1181-1204.
- O. Randal-Williams, *“Topological chiral homology” and configuration spaces of spheres*.
Morfismos (MIMS proceedings issue), **17** (2) (2013) 57-70.
- O. Randal-Williams, *Homology of the moduli spaces and mapping class groups of framed, r -Spin and Pin surfaces*.
Journal of Topology **7** (1) (2014) 155-186.
- O. Randal-Williams, *“Group-Completion”, local coefficient systems, and perfection*.
Quarterly Journal of Mathematics **64** (3) (2013) 795-803 .
- O. Randal-Williams, *The space of immersed surfaces in a manifold*.
Mathematical Proceedings of the Cambridge Philosophical Society **154** (3) (2013) 419-438.
- O. Randal-Williams, *Relations among tautological classes revisited*.
Advances in Mathematics, **231** (3-4) (2012) 1773-1785.
- O. Randal-Williams, *The Picard group of the moduli space of r -Spin Riemann surfaces*.
Advances in Mathematics, **231** (1) (2012) 482-515.
- J. Ebert and O. Randal-Williams, *Stable cohomology of the universal Picard varieties and the extended mapping class group*.
Documenta Mathematica, **17** (2012) 417-450.
- O. Randal-Williams, *Homological stability for unordered configuration spaces*.
Quarterly Journal of Mathematics, **64**(1) (2013) 303-326.
- O. Randal-Williams, *Embedded cobordism categories and spaces of submanifolds*.
International Mathematics Research Notices **3** (2011) 572-608.

S. Galatius and O. Randal-Williams, *Monoids of moduli spaces of manifolds*.
Geometry & Topology **14** (3) (2010) 1243–1302.

O. Randal-Williams, *The homology of the stable non-orientable mapping class group*.
Algebraic & Geometric Topology **8** (2008) 1811–1832.

PREPRINTS

J. Davighi, B. Gripaos and O. Randal-Williams, *Differential cohomology and topological actions in physics*, 38 pages. arXiv:2011.05768.

M. Bustamante and O. Randal-Williams, *On automorphisms of high-dimensional solid tori*, 50 pages. arXiv:2010.10887.

O. Randal-Williams, L. Tsui, and X.-G. Wen, *Quantization of Chern-Simons topological invariants for H-type and L-type quantum systems*, 17 pages. arXiv:2008.02613.

A. Kupers and O. Randal-Williams, *On diffeomorphisms of even-dimensional discs*, 91 pages. arXiv:2007.13884.

S. Galatius, A. Kupers, and O. Randal-Williams, *E_∞ -cells and general linear groups of infinite fields*, 84 pages. arXiv:2005.05620.

J. Ebert and O. Randal-Williams, *The positive scalar curvature cobordism category*, 91 pages. arXiv:1904.12951.

S. Galatius, A. Kupers, and O. Randal-Williams, *E_∞ -cells and general linear groups of finite fields*, 27 pages. arXiv:1810.11931.

S. Galatius, A. Kupers, and O. Randal-Williams, *Cellular E_k -algebras*, 201 pages. arXiv:1805.07184.

TEACHING

◇ **Lecturer** (at Cambridge)

- Part IA Groups, Michaelmas 2018, 2019.
- Part IB Groups, Rings, and Modules, Lent 2016, 2017, 2018.
- Part II Algebraic Topology, Michaelmas 2013, 2014.
- Part III Homotopy Theory, Lent 2015 (and as reading course in 2016).
- Part III Algebraic Topology, Michaelmas 2016.
- Part III Characteristic classes and K -theory, Lent 2018 (and as reading course in 2019).

◇ **Part III essay advisor** (at Cambridge), with titles *Complex cobordism and formal group laws, Algebraic K-theory of finite fields, Homological stability, Finite H-spaces, Representation stability, Topics in geometric topology, Vassiliev theory, Algebraic K-theory, Exotic spheres, Topological Hochschild homology, Surface bundles, Group cohomology from the topological viewpoint, E_k -algebras, Bott periodicity and the J-homomorphism*.

◇ **Examiner** (at Cambridge), IA 2015 and 2016, IB 2018 and 2019.

◇ **Supervisor** (at King's college Cambridge)

- IA Groups, revision Easter 2016, Michaelmas 2016, revision Easter 2017.
- IA Numbers & Sets, revision Easter 2014.
- IB Linear Algebra, Michaelmas 2014, revision Easter 2015, Michaelmas 2016, revision Easter 2017.
- IB Groups, Rings, and Modules, Lent 2017, revision Easter 2017.
- IB Geometry, Lent 2013.

◇ **Lecturer** (at Copenhagen)

- Topology, Autumn 2011.
- Algebraic Topology 1.5, Spring 2011.

◇ **Graduate supervisor**

- Cambridge PhD supervisor for Nina Friedrich 2014-2017, Nils Prigge 2016-2020, Ismael Sierra 2019-, Andreas Stavrou 2019-.
- Informal co-supervisor of Copenhagen PhD thesis of Mauricio Esteban Gómez López. Co-supervisor of Barcelona PhD thesis of Federico Cantero Morán.
- Advisor for two MS theses, Paolo Masulli (2011) and Mauricio Esteban Gómez López (2011), at Copenhagen.
- Advisor for two BSc theses, at Copenhagen.

◇ **Postdoctoral advisor**

- Manuel Krannich 2018-, Mauricio Bustamante 2019-, Arthur Soulié 2019.

◇ **Graduate lectures**

- Mentor for Talbot workshop on *Moduli spaces of manifolds*, 7th-13th April 2019.
- Lecture course on *Characteristic classes and moduli spaces of manifolds* – Algebraic Topology of Manifolds, Oxford, 11th-15th September 2017.
- Lecture course on *Cohomology of moduli spaces of manifolds* – European Autumn School in Topology, Utrecht, September 19-23 2016.
- Lecture course on *Moduli Spaces of Manifolds* – Young Topologists’ Meeting, Copenhagen, 4th July 2016.
- Lecture course on *Moduli spaces of manifolds*, Hausdorff Institute for Mathematics, Bonn, 4th-8th May 2015.
- Lecture course on *Moduli spaces of high-dimensional manifolds and applications to positive scalar curvature metrics* – Westfälischen Wilhelms-Universität Münster, 9th-13th June 2014.
- Co-organiser of lecture series *Moduli spaces of manifolds*, Copenhagen, February–June 2012.
- Organiser of seminar series *Surgery theory*, Copenhagen, 2011.
- Organiser of lecture series *Surgery theory*, Oxford, 2010.
- Lecture course on *Resolutions of moduli spaces and homological stability*, Oxford, 2010.
- Organiser of seminar series *Classification of Topological Quantum Field Theories, after J. Lurie*, Oxford, 2009.
- Organiser of seminar series *Nilpotence and periodicity in stable homotopy theory*, Oxford, 2008.

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| CONFERENCE
TALKS,
SEMINARS,
AND
COLLOQUIA | <ul style="list-style-type: none"> <i>E_∞-algebras and general linear groups</i> – Oxford topology seminar (online), 18th January 2021. <i>Diffeomorphisms of discs. I</i> – Münster topology seminar (online), 9th November 2020. <i>Diffeomorphisms of discs</i> – Princeton algebraic topology seminar (online), 15th November 2020. <i>Diffeomorphisms of discs</i> – MIT topology seminar (online), 14th September 2020. <i>Diffeomorphisms of discs</i> – opening of the Copenhagen center for Geometry and Topology (online), 27th August 2020. <i>E_∞-algebras and general linear groups</i> – Bonn topology seminar (online), 28th April 2020. <i>E_k-algebras and homological stability</i> – electronic Computational Homotopy Theory seminar, 16th January 2020. |
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- Spaces of manifolds* – Colloquium, Warwick, 11th October 2019.
- Spaces of manifolds* – Colloquium, Durham, 7th October 2019.
- Cohomology of moduli spaces* – Clay research conference, Oxford, 2nd October 2019.
- Two talks on *Cohomology of Torelli groups* – Automorphisms of Manifolds, Bonn, 2nd September 2019.
- Stable cohomology of diffeomorphism groups of 4-manifolds* – Four Manifolds: Confluence of High and Low Dimensions, Toronto, 9th July 2019.
- Cohomology of Torelli groups* – SYM 10 Years Old, Copenhagen, 27th June 2019.
- Homology of Hurwitz spaces and the Cohen–Lenstra heuristic for function fields (after Ellenberg, Venkatesh, and Westerland)* – Séminaire Bourbaki, Paris, 15th June 2019.
- Cohomology of Torelli groups* – Johnson homomorphisms and related topics, Tokyo, 15th May 2019.
- Cohomology of Torelli groups* – Geometry at infinity, Münster, 2nd April 2019.
- Tautological rings for smooth manifolds* – Geometry and Topology seminar, Málaga, 5th March 2019.
- Metastability in the homology of mapping class groups* – Geometry and Topology seminar, Imperial College London, 12th October 2018.
- Cellular E_k -algebras and homological stability* – INI, Cambridge, 7th August 2018.
- On Rognes’ connectivity conjecture* – Topologie, Oberwolfach, 12nd July 2018.
- Metastability in the homology of mapping class groups* – Manifolds, Groups, and Homotopy, Skye, 18th-23rd June 2018.
- On Rognes’ connectivity conjecture* – K -theory, A^1 -homotopy and quadratic forms, Warwick, 15th-16th February 2018.
- Two talks on *Metastable cohomology of moduli spaces of Riemann surfaces* – Bavarian Geometry and Topology Meeting, Augsburg, 14th-15th December 2017.
- Tautological rings* – Groups, Manifolds, and K -theory, Münster, 9th June 2017.
- Stable twisted cohomology via scanning* – Johnson homomorphisms and related topics, Tokyo, 26th May 2017.
- E_n -cells and applications* – Moduli and Traces, Copenhagen, 21st April 2017.
- Metastable cohomology of moduli spaces of Riemann surfaces* – British Mathematical Colloquium morning talk, Durham, 4th April 2017.
- Stable twisted cohomology via scanning* – OAC-manifolds, Oxford, 13th March 2016.
- Stable moduli spaces of manifolds* – Topology Seminar, QMUL, 11th March 2016.
- Cohomology of $\text{Aut}(F_n)$ with twisted coefficients* – Topologie, Oberwolfach, 18th July 2016.
- E_2 -cells and homological stability* – Topology of manifolds, Lisbon, 27th June 2016.
- Realising characteristic numbers of fibre bundles* – Scottish Topology Seminar, Edinburgh, 11th March 2016.
- Characteristic classes of fibre bundles* – OAC-manifolds, Oxford, 22nd February 2016.
- Tautological rings for high-dimensional manifolds* – Warwick, 18th February 2016.
- Infinite loop spaces and positive scalar curvature* – Aspects of Homotopy Theory, Southampton, 15th December 2015.
- Moduli spaces of manifolds* – Colloquium, Columbia University, New York, 15th October 2015.

Tautological rings for high-dimensional manifolds – Stanford University, 6th October 2015.

Tautological rings for high-dimensional manifolds – Manifolds Unlocking Higher Structures, Clay Mathematical Institute Workshop, Oxford, 28th September-2nd October 2015.

Moduli spaces of high-dimensional manifolds – Moduli spaces and their applications, Liverpool, 21st September 2015.

Moduli spaces of high-dimensional manifolds – PIMS Symposium on the Geometry and Topology of Manifolds, Vancouver.

Infinite loop spaces and positive scalar curvature – PIMS Symposium on the Geometry and Topology of Manifolds, Vancouver.

Tautological rings for high-dimensional manifolds – Stockholm, 15th April 2015.

Infinite loop spaces and positive scalar curvature – Stockholm, 14th April 2015.

Homological stability and abelianness – Teichmüller Modular Groups: A Celebration of Nikolai Ivanov's 60th Birthday, Chicago, 21st March 2015.

Cohomology of some diffeomorphism groups – Southampton, 23th February 2015.

Infinite loop spaces and positive scalar curvature – Oxford, 19th January 2015.

Cohomology of some diffeomorphism groups – Aberdeen, 15th December 2014.

Stable moduli spaces of high-dimensional manifolds – Topologie; Oberwolfach, 15th September 2014.

Stable moduli spaces of high-dimensional manifolds: applications – ICM Satellite Conference on Algebraic Topology, Dalian, China, 10th August 2014.

Cohomology of diffeomorphism groups – Workshop on Algebraic Topology and its Applications, Dalian, China, 7th August 2014.

Infinite loop spaces and positive scalar curvature – Analysis and Topology in Interaction, Cortona, 16th June 2014.

Moduli spaces of high-dimensional manifolds – British Mathematical Colloquium, Queen Mary, London, 9th April 2014.

Moduli spaces of high-dimensional manifolds – Algebraic Topology, MSRI, 27th February 2014.

Abelianisations of the mapping class groups of some highly-connected manifolds – Rice, Houston, 17th February 2014.

The tautological class κ_{-1} – Topology seminar, Stanford, 11th February 2014.

Homological stability of moduli spaces of manifolds – Algebraic Topology, MSRI, 31st January 2014.

Infinite loop spaces and positive scalar curvature – Geometry seminar, UCL, 14th January 2014.

Infinite loop spaces and positive scalar curvature – Glasgow, 2nd December 2013.

Stable moduli spaces of high-dimensional manifolds – Manchester, 18th November 2013.

The tautological class κ_{-1} – Cohomology of the moduli space of curves, Zürich, 11th October 2013.

Infinite loop spaces and positive scalar curvature – British Topology Meeting, Aberdeen, 9th September 2013.

Homological stability and moduli spaces – Homology Stability Workshop, Copenhagen, 26th August 2013.

The Picard groups of moduli spaces of r -Spin Riemann surfaces – Séminaire de géométrie algébrique; Jussieu, Paris, 16th May 2013.

Infinite loop spaces and positive scalar curvature – Sheffield, 2nd May 2013.

Infinite loop spaces and positive scalar curvature – Stanford, 9th April 2013.

Stable moduli spaces of high-dimensional manifolds – Nottingham, 7th December 2012.

Cohomology of the universal Picard varieties, and tautological relations – Algebraic geometry seminar; Humboldt-Universität zu Berlin, 5th December 2012.

The “Mumford conjecture” package, with applications – SFB colloquium; Humboldt-Universität zu Berlin, 4th December 2012.

The “Mumford conjecture” package, with applications – GQT colloquium; Universiteit van Amsterdam, 16th November 2012.

Stable moduli spaces of high-dimensional manifolds – Oxford, 29th October 2012.

El espacio de superficies en una variedad – XIX Encuentro de Topología, La Coruña, 19th October 2012.

Homological stability for moduli spaces of manifolds – Topologie; Oberwolfach, 19th September 2012.

Homological stability for moduli spaces of manifolds – 27th British Topology Meeting; Cambridge, 6th September 2012.

Stable moduli spaces of high-dimensional manifolds – Fourth Arolla Conference on Algebraic Topology; Arolla, 23rd August 2012.

Homological stability for moduli spaces of manifolds – Algebraic Topology: Applications and New Directions; Stanford, 27th July 2012.

Homological stability for moduli spaces of manifolds – 17th NRW meeting; Münster, 4th May 2012.

Stable moduli spaces of high-dimensional manifolds – Universitat de Barcelona, 6th February 2012.

Stable moduli spaces of high-dimensional manifolds – MPIM Bonn, 23rd January 2012.

Stable moduli spaces of high-dimensional manifolds – Edinburgh, 26th October 2011.

Stable moduli spaces of high-dimensional manifolds – Glasgow, 24th October 2011.

Universal Picard varieties and tautological relations – ETH, Zürich, 7th October 2011.

Stable moduli spaces of high-dimensional manifolds – MIT, 26th September 2011.

Picard group of the moduli space of r -Spin Riemann surfaces – Riemann Surfaces; PCMI, Utah, 12th July 2011.

Universal Picard varieties, extended mapping class groups, and tautological relations – Stanford, 3rd May 2011.

Two lectures on spaces of manifolds – NTNU, Trondheim, 28th-29th October 2010.

Monoids of moduli spaces of manifolds, II – Topologie; Oberwolfach, 22nd September 2010.

The Picard group of the moduli space of r -Spin curves – Summer Topology Workshop; Stanford University, 5th August 2010.

Resolutions of moduli spaces – Stanford University, 13th April 2010.

Resolutions of moduli spaces – TTT meeting; University of Warwick, 23rd March 2010.

Resolutions of moduli spaces and homology stability – University of Copenhagen, 1st February 2010.

Monoids of moduli spaces of manifolds – 25th Nordic and 1st British–Nordic congress of Mathematicians; Oslo, 8th June 2009.

Monoids of moduli spaces of manifolds – Manifold Perspectives; Oberwolfach, 27th May 2009.

Monoids of moduli spaces of manifolds – University of Bonn, 12th May 2009.

Homology of the stable non-orientable mapping class group – Stanford University, 13th January 2009.

Homology of the stable non-orientable mapping class group – TTT meeting; University of Sheffield, 9th December 2008.

Geometric delooping of cobordism categories – Westfälischen Wilhelms-Universität Münster, 24th April 2008.

Spaces of manifolds and tangential structures – Moduli spaces; University of Bonn / Max Planck Institute, 10th January 2008.

Embedded cobordism categories – University of Copenhagen, 15th October 2007.

Characteristic classes of bundles of non-orientable surfaces – 22nd British Topology Meeting; Sheffield, 10th September 2007.

LOCAL
SEMINARS

Cohomology of Torelli groups – Geometry seminar; University of Cambridge, 13th March 2019.

Applications of cellular E_2 -algebras – Geometry seminar; University of Cambridge, 16th November 2016.

Infinite loop spaces and positive scalar curvature – Geometry seminar; University of Cambridge, 16th October 2013.

Cohomology of braid groups and mapping class groups – GDO programme; Newton Institute, University of Cambridge, 28th February 2013.

The “Mumford conjecture” package, with applications – Geometry seminar; University of Cambridge, 14th November 2012.

The Picard group of the moduli space of r -Spin curves – Algebra and Topology seminar; University of Copenhagen, 11th October 2010.

Cohomology of moduli spaces – Junior Geometry and Topology seminar; University of Oxford, 3rd June 2010.

Arc complexes – Junior Geometric Group Theory seminar; University of Oxford, 25th May 2010.

Homology stability of spaces of surfaces – Topology seminar; University of Oxford, 23rd November 2009.

Monoids of moduli spaces of manifolds – Geometry seminar; University of Oxford, 1st June 2009.

Descent in algebra, geometry and topology – Junior Geometry and Topology seminar; University of Oxford, October 2008.

The Hopf invariant one problem – Junior Geometry and Topology seminar; University of Oxford, March 2008.

Poincaré–Hopf index theorem and the transfer – Junior Geometry and Topology seminar; University of Oxford, October 2007.

Classification of smooth manifolds up to cobordism – Junior Geometry and Topology seminar; University of Oxford, February 2007.

EXTENDED
VISITS

Sabbatical at Stanford University. 4th October–5th December 2015.

“Homotopy theory, manifolds, and field theories” programme, Hausdorff Centre for Mathematics, Bonn. 27th July-21st August 2015.

Research member at the “Algebraic Topology” programme, MSRI, Berkeley. 27th January-28th February 2014.

- CONFERENCES AND WORKSHOPS ATTENDED
- Opening Symposium* – Copenhagen Centre for Geometry and Topology (online), 27th August 2020.
 - Topologie* – Oberwolfach (online), 26th July - 1 August 2020.
 - Clay research conference and workshops* – Oxford, 30th September-4th October 2019.
 - Automorphisms of Manifolds* – Bonn, 2nd-6th September 2019.
 - Four Manifolds: Confluence of High and Low Dimensions* – Toronto, 8th-12th July 2019.
 - SYM 10 Years Old* – Copenhagen, 24th-28th June 2019
 - Séminaire Bourbaki* – Paris, 15th June 2019.
 - Johnson homomorphisms and related topics* – Tokyo, 13th-17th May 2019.
 - Geometry at infinity* – Münster, 1st-5th April 2019.
 - Manifolds* – INI, Cambridge, 3rd-7th December 2018.
 - Derived algebraic geometry and chromatic homotopy theory* – INI, Cambridge, 24th-28th September 2018.
 - Equivariant and motivic homotopy theory* – INI, Cambridge, 13th-17th August 2018.
 - Topologie* – Oberwolfach, 2nd-6th July 2018.
 - Manifolds, Groups, and Homotopy* – Skye, 18th-23rd June 2018.
 - OAC-manifolds* – Cambridge, 20th April 2018.
 - K-theory, A^1 -homotopy and quadratic forms*, Warwick, 12th-16th February 2018.
 - Bavarian Geometry and Topology Meeting*, Augsburg, 14th-15th December 2017.
 - OAC-manifolds* – Aberdeen, 5th October 2017.
 - Algebraic Topology of Manifolds* – Oxford, 11th-15th September 2017.
 - Analysis and Topology in Interaction* – Cortona, 26th-30th June 2017.
 - Groups, Manifolds, and K-theory* – Münster, 5th-9th June 2017.
 - Johnson homomorphisms and related topics* – Tokyo, 22nd-26th May 2017.
 - Moduli and Traces* – Copenhagen, 20th-21st April 2017.
 - British Mathematical Colloquium* – Durham, 3rd-6th April 2017.
 - OAC-manifolds* – Oxford, 13th March 2017.
 - European Autumn School in Topology* – Utrecht, September 19-23 2016.
 - OAC-manifolds* – Cambridge, 9th September 2016.
 - Topologie* – Oberwolfach, 17th-23rd July 2016.
 - Young Topologists’ Meeting* – Copenhagen, 4th-8th July 2016.
 - Topology of manifolds* – Lisbon, 27th June-1st July 2016.
 - OAC-manifolds* – Aberdeen, 9th May 2016.
 - Scottish Topology Seminar* – Edinburgh, 11th March 2016.
 - OAC-manifolds* – Oxford, 22nd February 2016.
 - Aspects of Homotopy Theory* – Southampton, 14th–19th December 2015.
 - Manifolds Unlocking Higher Structures* – Oxford, 28th September-2nd October 2015.

- Homotopy theory, manifolds, and field theories* – Bonn, 17th-21st August 2015.
- PIMS Symposium on the Geometry and Topology of Manifolds* – Vancouver, 29th June-5th July 2015.
- Introductory School: Homotopy theory, manifolds, and field theories* – Bonn, 4th-8th May 2015.
- Teichmüller Modular Groups* – Chicago, 20th-22nd March 2015.
- ICM Satellite Conference on Algebraic Topology* – Dalian, China, 3rd-13th August 2014.
- Manifolds, K-theory, and related topics* – Dubrovnik. 23rd-27th June 2014.
- Analysis and Topology in Interaction* – Cortona. 16th-20th June 2014.
- Surgery theory and its applications in geometry* – Münster. 9th-13th June 2014.
- British Mathematical Colloquium* – Queen Mary, London. 7th-10th April 2014.
- Introductory Workshop: Algebraic Topology* – MSRI, Berkeley. 27th-31st January 2014.
- Cohomology of the moduli space of curves* – Zürich. 10th-13th October 2013.
- British Topology Meeting 2013* – Aberdeen. 9th-11th September 2013.
- Homology Stability Workshop* – Copenhagen. 26th-30th August 2012.
- BMC 2013* – Sheffield. 25th-28th March 2013.
- Aspects of Topology* – Oxford. 17th-19th December 2012.
- XIX Encuentro de Topología* – La Coruña. 19th-21st October 2012.
- Topologie* – Oberwolfach. 17th-22nd September 2012.
- 27th British Topology Meeting* – Cambridge. 6th–8th September 2012.
- Fourth Arolla Conference on Algebraic Topology* – Arolla, Switzerland. 20th-26th August 2012.
- Algebraic Topology: Applications and New Directions* – Stanford. 23rd-27th July 2012.
- 17th NRW meeting* – Münster. 4th-5th May 2012.
- Riemann surfaces* – PCMI, Park City, Utah. 3rd-17th July 2011.
- The Kervaire invariant and stable homotopy theory* – ICMS, Edinburgh. 25th-29th April 2011.
- Topologie* – Oberwolfach. 19th-25th September 2010.
- 25th British Topology Meeting* (organiser) – Oxford. 6th-9th September 2010.
- West Coast Algebraic Topology Summer School* (scientific committee) – Eugene, Oregon. 9th-15th August 2010.
- Summer Topology Workshop* – Stanford. 2nd-6th August 2010.
- 24th British Topology Meeting* – Leicester. 14th-15th September 2009.
- 25th Nordic and 1st British–Nordic congress of Mathematicians* – Oslo. 8th-11th June 2009.
- Manifold Perspectives* – Oberwolfach. 24th-30th May 2009.
- Third Arolla Conference on Algebraic Topology* – Arolla. 18th-24th August 2008.
- Homotopical Group Theory and Topological Algebraic Geometry* Conference and Workshop – Copenhagen / Bonn. 16th-27th June 2008.
- Topology in the Swiss Alps, Young Topologists' Meeting* – Le Châtelard. 26th-31st May 2008.
- Moduli spaces* Conference and Workshop – University of Bonn / Max Planck Institute. 1th-11th January 2008.

22nd British Topology Meeting – Sheffield. 10th-12th September 2007.

Workshop on Homological Algebra – Southampton. 8th-14th July 2007.

Postnikov Memorial Conference – Będlewo. 8th-14th July 2007.

Workshop on Stable Homotopy Theory – Strasbourg. 7th-11th May 2007.

Journal of Topology launch meeting – Oxford. 19th-21st March 2007.

- MEETINGS ORGANISED
- “Manifolds and K-Theory: the legacy of Andrew Ranicki”, ICMS Edinburgh, 2021. (with C. Barwick, D. Crowley, U. Tillmann)
 - “Cellular E_k -algebras”, Oberwolfach, 2021. (with A. Kupers, S. Galatius)
 - “Manifolds and Groups”, Oberwolfach, 2020. (with C. Löh, Th. Schick)
 - “Patterns in cohomology of moduli spaces”, Clay Research Conference Workshop, Oxford, 2019. (with S. Galatius)
 - “Manifolds”, Cambridge, 2018. (with D. Ayala, U. Tillmann, M. Weiss)
 - “Analysis and Topology in Interaction”, Cortona, 2017. (with W. Lück, R. Melrose, P. Piazza, Th. Schick)
 - OAC-manifolds meetings, 2016-2018. (with U. Tillmann, R. Hepworth)
 - 25th British Topology Meeting, Oxford, 2010. (with J. Giansiracusa)
 - Scientific committee for “West Coast Algebraic Topology Summer School”, August 2010.
 - Copenhagen Topology seminar 2010-2012.
 - Oxford Junior Geometry & Topology Seminar 2007-2008.
- SERVICE
- Undergraduate admissions interviewer – King’s College, Cambridge, 2012-2016.
 - Undergraduate admissions interviewer – Jesus College, Oxford, 2006-2009.
 - Computing committee – DPMMS, 2018-.
 - Hiring committee – DPMMS, 2018, 2019.