

Andrew Lobb

Education

- 2002-2007 **PhD**, *Harvard*.
- 1998-2002 **MMath**, *Oxford*.

Employment

- 2017- Durham University, Associate Professor (Reader)
- 2015-2017 Durham University, Reader
- 2011-2015 Durham University, Lecturer
- 2009-2011 SUNY Stony Brook, Postdoc
- Spring 2010 MSRI, Postdoc
- 2007-2009 Imperial College London, Chapman Fellow (postdoc)

Papers

- The Dold-Whitney theorem and the Sato-Levine invariant, (2017) under review.
- Khovanov homotopy calculations using flow category calculus, (with Orson and Schuetz), (2017) to appear in **Experiment. Math.**
- A calculus for flow categories, (with Orson and Schuetz), (2017) under review.
- Upsilon-like concordance invariants from $sl(n)$ knot cohomology, (with Lewark), (2017) to appear in **Geom. Topol.**
- Framed cobordism and flow category moves, (with Orson and Schuetz), **Algebr. Geom. Topol.** 18 (2018), 2821-2858.
- A Khovanov stable homotopy type for colored links (with Orson and Schuetz), **Algebr. Geom. Topol.** 17 (2017) 1261-1281.
- On the functoriality of Khovanov-Floer theories (with Baldwin and Hedden), (2015) under review.
- Morse moves in flow categories (with Jones and Schuetz), **Indiana Univ. Math. J.** 2017 66(5): 1603-1657
- An sl_n stable homotopy type for matched diagrams (with Jones and Schuetz), (2015) under review.
- New quantum obstructions to sliceness (with Lewark), **Proc. Lond. Math. Soc.** 112 (2016), No. 1, 81-114
- On spectral sequences from Khovanov homology (with Zentner), (2013) under review.
- 2-strand twisting and knots with isomorphic quantum knot homologies, **Geom. Topol.** 18 (2014), 873-895.

Durham University – Department of Mathematical Sciences – Durham, UK

☎ +44 75-7651768 • ✉ andrew.lobb@durham.ac.uk

🌐 www.maths.dur.ac.uk/users/andrew.lobb

1/3

- The quantum sl_n graph polynomial and a moduli space (with Zentner), **Int. Math. Res. Not. IMRN** 2014, Vol. 2014, No. 7: 1956-1972.
- The Kanenobu knots and Khovanov-Rozansky homology, **Proc. Amer. Math. Soc.** 142 (2014), Number 4, 1447-1455
- A note on Gornik's perturbation of Khovanov-Rozansky homology, **Algebr. Geom. Topol.** 12 (2012), 293-305.
- Computable bounds for Rasmussen's concordance invariant, **Compos. Math.** 2011, Vol 147, Issue 02, 661-668.
- On Casson-type instanton moduli spaces over negative definite 4-manifolds (with Zentner), **Q. J. Math.**, 2011, Vol 62, Issue 2, 433-450.
- slice genus lower bound from $sl(n)$ Khovanov-Rozansky homology, **Adv. Math.**, 2009, Vol 222, Issue 4, 1220-1276.

Recent Grants

- LMS grant and various smaller sums to support the British Mathematical Colloquium 2017.
- **Principal Investigator** EPSRC EP/M000389/1, New homotopy-type invariants of knots, 2015-2017 £201000.
- **Co-Investigator** Leverhulme Programme Grant 2014-2018 £1700000.
- LMS/EPSRC Grant to host a Summer School at Durham, 2013
- **Principal Investigator** EPSRC EP/K00591X/1 *Knot homology: Theory and Computation*, 2013-2014. £89000.

PhD students and postdocs

- 2018-2018 Carlo Collari, Accademia dei Lincei funded postdoc.
- 2017-2021 Oliver Singh, EPSRC funded graduate student.
- 2015-2017 Patrick Orson, postdoc hired on EPSRC grant EP/M000389/1
- 2014-2018 Will Rushworth, EPSRC funded graduate student.
- 2014-2019 David Evans, Leverhulme funded graduate student, joint supervision with Prof Paul Sutcliffe (Mathematical Physics).
- 2014-2018 Lauren Scanlon, Leverhulme funded graduate student, joint supervision with Dr Jeremy Kendal (Anthropology)
- 2012-2016 Jonathan Grant, EPSRC funded graduate student
- 2013-2014 Lukas Lewark, postdoc hired on EPSRC grant EP/K00591X/1.

Selected Recent Talks

- Sep 2018 Zurich, Switzerland
- Sep 2018 Bern, Switzerland
- May 2018 Oslo, Norway
- Apr 2018 Stony Brook, USA
- Apr 2018 Columbia, USA

Apr 2018 Boston College, USA
Mar 2018 UQAM, Canada
Mar 2018 Aspen, USA
Feb 2018 CIRM, France
Jan 2018 Budapest, Hungary
Sep 2017 MPIM Bonn, Germany
Jul 2017 UCLA, USA.
Jun 2017 Bern, Switzerland.
May 2017 Cambridge, UK
Jul 2016 AIMS, Ghana
Jul 2016 Regensburg, Germany
Feb 2016 BIRS, Canada
Dec 2015 Glasgow, UK
Oct 2015 Aberdeen, UK
Jun 2015 Porto, Portugal
Apr 2015 Stony Brook, USA
Apr 2015 Simons Center, USA

Selected Service

- *Organizer* Six week programme at Kavli Institute, UCSB, Nov-Dec 2018
- *Organizer* Week-long workshop at the Aspen Center for Physics, Mar 2018
- *Chairman* British Mathematical Colloquium 2017
- *Principal Organizer* Six month programme at Newton Institute, 2017
- *Organizer* Prospects in Mathematics, Durham, 2013
- *Organizer* LMS-EPSRC Low-dim topology summer school, Durham, 2013
- *Organizer* Knot homologies conference, Stony Brook, 2010
- *PhD committee member* For Michael Snape (Glasgow), Benjamin Bode (Bristol), Carlo Collari (Pisa), Paul Wedrich (Cambridge), Lukas Lewark (Paris).
- Referee for various mathematics journals and reviewer for MathSciNet.