Nicholas M. Wilkins

CONTACT INFORMATION

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RESEARCH INTERESTS

Symplectic topology, Floer theory, quantum cohomology, Gromov-Witten invariants, string topology.

EMPLOYMENT

MIT, U.S.A
Visiting Scholarship, Fixed term: 01 February 2019 - 31 July 2019

EDUCATION

University of Oxford, U.K. (Green Templeton College)
Ph.D. Candidate, Mathematics (completion of requirements December 2019)
Dissertation topic: Quantum Steenrod Squares, Related Operations, and their Properties
Advisor: Alexander Ritter

University of Cambridge, U.K. (Clare College)
MMath, July 2015, Distinction

University of Cambridge, U.K. (Clare College)
BA, July 2014, First Class Honours each year.
Fourth Wrangler, out of ca.200 students. Exam results in each year: 93/100, 94/100, 96/100.

AWARDS

EPSRC Funding (2015-2019, **University of Oxford Mathematics Department**),
awarded in support of my DPhil project.

Owst Prize for Mathematics (2014, **Clare College**),
awarded for placing in the top 1/3 of Wranglers.

Foundation Scholarship (2014, **Clare College**),
awarded for achieving a Class 1 degree in the third year and at least a Class 2.1 in the second year.

Amiya Banerji Prize for Mathematics (2012, **Clare College**),
awarded for achieving the best result out of all of the first of second years in examinations.

PUBLICATIONS

A construction of the quantum Steenrod squares and their applications.
Preprint arXiv:1805.02438, May 2018

Quantum Steenrod Operations and the Equivariant Pair-of-pants on Symplectic Cohomology.
Preprint arXiv:1810.02738, October 2018

TALKS

A Steenrod-square-type operation for quantum cohomology and Floer theory
20/11/2018, **University of Oxford**, Algebraic Geometry Seminar

The quantum Steenrod square
24/10/2018, **University of Cambridge**, Differential Geometry and Topology Seminar

Algebraic structures on the homology of the loop space of a manifold
30/07/2018, **European Talbot**, Free Loop Spaces with Nathalie Wahl and Alexandru Oancea

The quantum Steenrod square and quantum Cartan formula
01/12/2017, **Columbia University**, Symplectic Geometry, Gauge Theory, and Categorification Seminar

The Quantum Steenrod Square and its Properties
09/11/2017, **University of Oxford**, Junior Geometry and Topology seminar

Quantum Steenrod Squares
25/01/2017, **UCL/KCL**, Junior Geometry seminar

Conferences, workshops and summer schools

07-08/2018, *European Talbot, Free Loop Spaces with Nathalie Wahl and Alexandru Oancea* (Fischbach bei Dahn, Germany)

07/2018, *British Isles Graduate Workshop II in Singularities and Symplectic Topology* (Jersey, UK)

01/2018, *XII Workshop on Symplectic Geometry, Contact Geometry, and Interactions* (Uppsala, Sweden)

02/2017, *Winter school in convex symplectic geometry* (Bochum, Germany)

01/2017, *Singularities, Symmetries & Submanifolds* (London, UK)

08/2016, *Workshop on Symplectic Field Theory VIII* (Berlin, Germany)

06-07/2016, *Summer School 2016 of the IMJ-PRG* (Paris, France)

02/2016, *X Workshop on Symplectic Geometry, Contact Geometry, and Interactions* (Augsburg, Germany)

08/2015, *QGM Masterclass/CMI Summer School in derived geometry* (Aarhus, Denmark)

Academic Teaching

University of Oxford, Class Tutor for:
Fall 2018, *Metric Spaces and Complex Analysis.*

University of Oxford, Teaching Assistant for:
Fall 2016, *Differentiable Manifolds.*
Spring 2016, *Representation Theory of Semisimple Lie Algebras.*
Fall 2015, *Topology and Groups.*

University of Oxford, Teaching Training Sessions:
Class Teaching Seminar, 06/10/2015.
Tutorial Teaching Seminar, 10/10/2018.

References

Prof. Alexander Ritter (*Email:* ritter@maths.ox.ac.uk, *Tel:* +44 1865 273556)
Mathematical Institute, Radcliffe Observatory Quarter, Woodstock Road, Oxford, OX2 6GG, U.K.

Prof. Paul Seidel (*Email:* pseidel@mit.edu, *Tel:* +1 617 253 3773)
MIT, Department of Mathematics, 77 Massachusetts Ave, Cambridge, MA 02139, U.S.A.

Prof. Mark McLean (*Email:* markmclean@math.stonybrook.edu, *Tel:* +1 631 632 8351)
Stony Brook University, 100 Nicolls Rd, Stony Brook, NY 11794, U.S.A.