

Peter Lambert-Cole

PERSONAL INFORMATION

Max Planck Institute for Mathematics
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Germany

Citizenship: USA
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RESEARCH INTERESTS

Differential Geometry: contact and symplectic geometry
Geometric Topology: low-dimensional topology, 4-manifolds, knot theory, categorification

EDUCATION

Louisiana State University, Baton Rouge, LA

- Ph.D. in Mathematics, August 2014.
• Thesis: *Invariants of Legendrian products*
• Thesis Advisor: Scott Baldrige.
M.S. in Mathematics, May 2011.

Princeton University, Princeton, NJ

A.B. in Mathematics, June 2009.

EMPLOYMENT

Postdoctoral Fellow, Max Planck Institute for Mathematics	September 2019-present
Visiting Assistant Professor, Georgia Institute of Technology	August 2017-August 2019
Zorn Postdoctoral Fellow, Indiana University	August 2014-June 2017

PUBLICATIONS

Peter Lambert-Cole. Twisting, mutation and knot Floer homology. *Quantum Topology* **9** (2018) 749-774.

Peter Lambert-Cole. On Conway mutation and link homology. *Advances in Mathematics* **354** (2019).

Peter Lambert-Cole. Trisections, intersection forms and the Torelli group, to appear in *Algebraic & Geometric Topology*.

Peter Lambert-Cole and Jeffrey Meier. Bridge trisections in rational surfaces, accepted to *Journal of Topology and Analysis*.

Peter Lambert-Cole. Symplectic surfaces and bridge position, accepted to *Geometriae Dedicata*.

Daniel Kasprowski, Peter Lambert-Cole, Markus Land and Ana Lecuona. Topologically flat embedded 2-spheres in specific simply-connected 4-manifolds. accepted to *MATRIX Annals*

P.Lambert-Cole and M. Miller. Trisections of 5-manifolds, accepted to *MATRIX Annals*

PREPRINTS

Peter Lambert-Cole. Bridge trisections in $\mathbb{C}\mathbb{P}^2$ and the Thom conjecture. Submitted (2019)

Peter Lambert-Cole and David Shea Vela-Vick Transverse braids and combinatorial knot Floer homology. (2017). *arXiv 1703.06861*

Peter Lambert-Cole and Danielle O'Donnol. Planar Legendrian Theta graphs. Submitted (2019) *arXiv 1606.00486*

Peter Lambert-Cole and Danielle O'Donnol. *Planar Legendrian graphs.* Submitted (2019). *arXiv 1604.00836*

Peter Lambert-Cole, Michaela Stone and David Shea Vela-Vick. Braids and combinatorial knot Floer homology. Submitted (2019) *arXiv 1312.5586*

Peter Lambert-Cole. Legendrian products. *arXiv 1301.3700*

TEACHING

Georgia Institute of Technology

M2552: Differential Equations	Spring 2019
M2551: Multivariable Calculus	Fall 2018
M8803: 4-manifolds	Spring 2018
M1552: Integral Calculus	Fall 2017

Indiana University

M301: Linear Algebra with Applications	Spring 2017
M211: Calculus 1 (2 sections)	Fall 2016
M344: Differential Equations 2	Spring 2016
S344: Honors Differential Equations 2	Spring 2016
M343: Differential Equations (2 sections)	Fall 2015
S343: Honors Differential Equations	Fall 2015
M303: Linear Algebra	Spring 2015
M120: Introduction to Calculus 2 (2 sections)	Fall 2014

Louisiana State University

M1550: Calculus 1	Spring 2011, Spring 2012
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INVITED

CONFERENCE AND
COLLOQUIUM TALKS

Western Washington University	October 2019
London Mathematics Society Durham Symposium	August 2019
Joint Los Angeles Topology seminar	April 2019
AMS Sectional Meeting, Auburn University	March 2019
Topology of Manifolds, Matrix Institute, University of Melbourne, Australia	January 2019
Virginia Topology Conference	December 2018
Knotted Surfaces in 4-manifolds Conference	October 2018
AMS Sectional Meeting, Northeastern University	April 2018
University of Georgia, Joint UGA-GT Topology seminar	November 2017
Triangle Topology seminar (Duke-UNC-NC State)	February 2017
Ball State University, Mathematics Department Colloquium	November 2016
AMS Sectional Meeting, Michigan State University	March 2015
AMS Sectional Meeting, Temple University	October 2014
AMS Sectional Meeting, UMBC	March 2014

Graduate Student Topology/Geometry conference, University of Notre Dame
AMS Sectional Meeting, Tulane University

April 2013
October 2012

INVITED SEMINAR
TALKS

2019: Columbia University, Michigan State University, Max Planck Institute for Mathematics, Boston College, Louisiana State University, University of Georgia, Princeton University
2018: Indiana University
2017: Louisiana State University, California Institute of Technology, Georgia Institute of Technology, University of California, Davis, Stanford University, Boston College
2016: Princeton University, University of Michigan, Michigan State University
2014: Indiana University, Rice University
2013: University of Texas, Austin, Boston College, Columbia University, Georgia Institute of Technology, University of Georgia, Duke University.

HONORS AND
AWARDS

Pasquale Porcelli Award for Graduate Research Excellence 2013
Louisiana State University

VIGRE Dissertation Year Fellowship 2013
Louisiana State University

Board of Regents Fellowship 2009-2013
Louisiana State University

NIH Quantitative and Computational Neuroscience Grant Summer 2008
Princeton University

Edward J. Bloustein Distinguished Scholar 2005-2009
State of New Jersey

SERVICE

Reviewing
Referee for *Journal of Symplectic Geometry, Algebraic & Geometric Topology, Canadian Journal of Mathematics, Mathematical Proceedings of Cambridge Philosophical Society*

Conferences and workshops co-organized

Floer de Lis conference, Baton Rouge, LA 2020
AIM SQuaRE: Trisections, knotted surfaces, and symplectic 4-manifolds 2019
Tech Topology Conference 2017,2018

Seminars coorganized

Georgia Tech/UGA Joint Topology seminar 2017-present
Georgia Tech Topology working seminar 2017-present
Indiana University Topology seminar 2014-2017
Indiana University Topology/Geometry working seminar 2014-2017
Louisiana State University smooth topology seminar 2012-2014
Louisiana State University Junior Topology seminar 2010-2014

REU supervisor

Braids and knot Floer homology, Louisiana State University 2012
Undergraduate students: Samuel Connolly, Michael Stone and Ellen Weld

Residential Fellow
Hutton Honors College, Indiana University

2015-2017