

**CONTACT  
INFORMATION**

Department of Mathematics  
Duke University  
Box 90320  
Durham, NC 27708-0320

919-619-5730  
[jonalfcam@gmail.com](mailto:jonalfcam@gmail.com)  
<http://www.jonathanacampbell.com>  
Citizenship: US

**APPOINTMENTS**

2019 - present Griffiths Assistant Research Professor, Duke University  
2016 - 2019 Visiting Assistant Professor, Vanderbilt University  
2013 - 2016 RTG Instructor, University of Texas at Austin

**DEGREES**

2013 Ph.D. in Mathematics, Stanford University.  
Advisors: Ralph Cohen, Andrew Blumberg  
2007 B.S. in Mathematics, MIT.

**VISITING POSITIONS  
AND RESEARCH  
VISITS**

May - June, 2017. Simons Center for Geometry and Physics, as part of the program *Mathematics of Topological Phases of Matter*  
May - June, 2018. Institute for Advanced Study, as part of the *Summer Collaborators* program (with Inna Zakharevich)

**PUBLICATIONS**

1. *The Algebraic K-Theory of Varieties*. Trans. Amer. Math. Soc. 371 (2019), no. 11, 7845-7884. 19D99.
2. *A Guide for Computing Stable Homotopy Groups*. Joint w/ Agnes Beaudry. Topology and quantum theory in interaction, 89-136, Contemp. Math., 718, Amer. Math. Soc., Providence, RI, 2018. 55Q10 (55R40 55S10 55T15)
3. *Topological Hochschild Homology and Higher Characteristics*. Joint w/ Kate Ponto. Algebr. Geom. Topol. 19 (2019), no. 2, 965-1017. 55R12 (16D90 18D05 19D55 55M20)
4. *Derived  $\ell$ -adic  $\zeta$ -functions*. Joint w/ Jesse Wolfson and Inna Zakharevich. Adv. Math. 354 (2019), 106760. 14C35 (11S40 14F42 14G10 18F25 18F30)
5. *Iterated Traces in Bicategories and Lefschetz Theorems*. Joint w/ Kate Ponto. <https://arxiv.org/abs/1908.07497>.
6. *Devissage and Localization for the Grothendieck Spectrum of Varieties*. Joint w/ Inna Zakharevich. Submitted <https://arxiv.org/abs/1811.08014>
7. *Classification of Symmetry Protected Phases via Homotopy Theory*. Submitted. <http://arxiv.org/abs/1708.04264>.
8. *Derived Koszul Duality and Topological Hochschild Homology*. Submitted. <http://arxiv.org/abs/1401.5147>
9. *(Co)Homology of Spectral Categories*. <http://arxiv.org/abs/1512.07521>.

**IN PREPARATION**

10. *Facets of the Witt Vectors*.
11. *K-Theory with Squares*. Joint w/ Inna Zakharevich.
12. *Scissors Congruence and the Rank Filtration in K-theory*. Joint w/ Inna Zakharevich.
13. *Fixed Point Theory and TR*. Joint w/ John Lind, Cary Malkiewich, Kate Ponto, and Inna Zakharevich.

## INVITED TALKS

*TBA*, The Ohio State University, November 11, 2019  
*Hilbert's Generalized Third Problem and Homotopy Theory*, University of Kentucky, October 3, 2019.  
*Scissors Congruence and the Algebraic K-theory of the Complex Numbers*, North Carolina State University, September 17, 2019.  
*Cutting and Pasting in Algebraic K-theory – AKA Combinatorial K-theory*, University of British Columbia  
*Topological Hochschild Homology and Higher Characters*, Michigan State University, November 8, 2018.  
*K-Theory and Polytopes*, EPFL, October 8-22, 2018.  
*Topological Hochschild Homology and Fixed Point Invariants*, EPFL, October 8-22, 2018.  
*Fixed Point Theory and K-Theory*, Cornell, October 4, 2018.  
*Fixed Point Theory and the Cyclotomic Trace*, SUNY-Albany, September 21, 2018.  
*Cutting up Space: The Dehn Invariant*, Union College, September 20, 2018.  
*Fixed Point Theory and the Cyclotomic Trace*, Indiana University, September 4, 2018.  
*Combinatorial K-Theory, Devissage and Localization*, Homotopy Theory Berlin, June 22, 2018.  
*An Introduction To, and Extension Of, Algebraic K-Theory*, University of Kentucky, April 10, 2018.  
*THH and Fixed Point Invariants*, University of Virginia, November 9, 2017.  
*Devissage for Cut and Paste K-theory*, University of Illinois, Urbana-Champaign, October 24, 2017.  
*Lifting the Zeta Function*, Johns Hopkins University, April 17, 2017.  
*A Spectral Lift of the Zeta Function*, Vanderbilt University, April 15, 2016.  
*The Algebraic K-Theory of Varieties*, Stanford University, Oct 27, 2015.  
*The Algebraic K-Theory of Varieties*, University of Kentucky, Sept 10, 2015.  
*The Algebraic K-Theory of Varieties*, University of Chicago, March 10, 2015.  
*The Algebraic K-Theory of Varieties*, University of Illinois, Feb 10, 2015.  
MIT Topology Seminar, MIT, March 31, 2014.  
Joint Mathematics Meetings, Baltimore MD, Jan 17, 2014.  
*Topological Hochschild Homology and Koszul Duality* University of California Riverside, November 27, 2012.  
*Topological Hochschild Homology and Koszul Duality* Johns Hopkins University, November 19, 2012.  
*Topological Hochschild Homology and Koszul Duality* University of Illinois Urbana-Champaign, November 13, 2012.  
*Topological Hochschild Homology and Koszul Duality* University of Chicago, October 30, 2012.  
*Topological Hochschild Homology and Koszul Duality* Northwestern University, October 29, 2012.

TEACHING  
EXPERIENCE -  
PRIMARY  
INSTRUCTOR

At Vanderbilt University  
Fall 2018 Math 1300 — Accelerated Calculus for Engineers  
Spring 2018 Math 3200 — Introduction to Topology  
Fall 2017 Math 2300 — Multivariable calculus  
Spring 2017 Math 2300 — Multivariable calculus  
Fall 2016 Math 3200 — Introduction to Topology

## At UT-Austin

Fall 2015 Math 392C — Rational Homotopy Theory  
Spring 2015 Math 361 — Complex Analysis  
Fall 2014 Math 408C — Calculus I  
Spring 2014 Math 408M — Multivariable Calculus  
Fall 2013 Math 408D — Calculus II

TEACHING  
EXPERIENCE -  
TEACHING  
ASSISTANT

At Vanderbilt University  
Fall 2016 Math 1300 — Accelerated Single Variable Calculus

## At Stanford University

Winter 2012 Math 121 — Modern Algebra II, Galois Theory  
 Fall 2012 Math 51 ACE — Multivariable calculus and linear algebra. Special two hour section, coordinated with engineering diversity program (ACE).  
 Spring 2011 Math 51 — Multivariable Calculus and Linear Algebra  
 Winter 2011 Math 116 — Complex Analysis  
 Spring 2010 Math 151 — Differential Topology  
 Fall 2009 Math 51 — Multivariable Calculus and Linear Algebra  
 Spring 2009 Math 20 — Integral Calculus  
 Fall 2008 Math 52A — Advanced Multivariable Calculus

CONFERENCES  
 ORGANIZED

Shanks Workshop on Homotopy Theory. April 13-14, 2019, Vanderbilt University  
 Shanks Workshop on Homotopy Theory. March 25-26, 2017, Vanderbilt University

CONFERENCES  
 ATTENDED

Midwest Topology Seminar. University of Kentucky, September 6, 2018.  
 Homotopy Theory Summer, Berlin. June 18 - 22.  
 Midwest Topology Seminar. Indiana University, April 28, 2018.  
 Homotopy Theory on the Ecliptic. August 18-21, 2017. Reed College.  
 Homotopy Theory: Tools and Applications. July 17-21, 2017. University of Illinois at Urbana-Champaign.  
 Strongly Correlated Topological Phases of Matter. May 10 - June 10, 2017. Simons Center for Mathematics and Physics.  
 Cornell Topology Festival. May 12-14, 2017. Cornell University, Ithaca, NY.  
 Conference on Invertible Objects and Duality in Derived Algebraic Geometry and Homotopy Theory. April 3-7, 2017. Regensburg, Germany.  
 Midwest Topology Seminar. September 17-18, 2016 Purdue University, West Lafayette, Indiana.  
 Reimagining the Foundations of Algebraic Topology. April 7-11, 2014. MSRI, Berkeley, California.  
 Introductory Workshop, Algebraic Topology. January 27-31, 2014. MSRI, Berkeley, California.  
 Workshop on Equivariant, Chromatic and Motivic Homotopy Theory. March 25-29, 2013. Northwestern University, Evanston, Illinois.  
 Midwest Topology Seminar. October 27-28, 2012. Michigan State University, East Lansing, Michigan.  
 The Legacy of Daniel Quillen: K-theory and Homotopical Algebra. October 6-8, 2012. Cambridge, MA.  
 Fourth Arolla Conference on Algebraic Topology. August 20-26, 2012. Arolla, Switzerland.  
 Stanford Symposium. July 23-27, 2012. Stanford, CA.  
 West Coast Algebraic Topology Summer School: Algebraic K-theory. July 16-20, 2012. Stanford, California.  
 Michigan Derived Algebraic Geometry RTG Learning Workshop. May 17- 19, 2012. Ann Arbor, Michigan.  
 Park City Mathematics Institute : Moduli Spaces of Riemann Surfaces. July 3- July 23 2011, Park City Utah.  
 Conference on Homotopy Theory and Derived Algebraic Geometry. Aug. 30 - Sept. 3 2010. Fields Institute, Toronto.  
 MSRI Hot Topics: The Kervaire Invariant. Oct 25-Oct 29 2010, MSRI, Berkeley, California.  
 West Coast Algebraic Topology Summer School: Homotopy Theory of Moduli Spaces. Aug 9-14 2010, University of Oregon, Eugene, Oregon.  
 Copenhagen Topology Conference 2010. Jan 8 - Jan 10, 2010, Copenhagen, Denmark.

OTHER  
 EMPLOYMENT

July 2007 - Jun 2008. Quantitative Analyst at Edison Mission Marketing and Trading.

## COMPUTER SKILLS

Experience with Windows, Mac, and Linux machines. Programming languages: Extensive experience with Mathematica and familiarity with Matlab, Python, Haskell, Scheme (LISP), Perl.

Experience with the database program FileMaker and with SQL and Microsoft Access.