

Sean Tilson

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Personal

Born on October 19, 1984.

United States Citizen.

Education

Undergraduate

University of Michigan, 2002-2003

Wayne State University, 2003-2007

Graduate

Wayne State University, 2007-2013 Ph.D. in Mathematics

Thesis Advisor: Robert R. Bruner

Thesis Title: Power Operations in the Künneth and C_2 -equivariant Adams spectral sequences with applications

Employment

Postdoctoral Fellow, Bergische Universität Wuppertal, October 2016 - July 2020

Research Assistant, Institut für Mathematik der Universität Osnabrück, August 2016 - September 2016

Postdoctoral Fellow in the Graduiertenkolleg: Kombinatorische Strukturen in der Geometrie, Institut für Mathematik der Universität Osnabrück, May 2014 - July 2016

Postdoctoral Fellow, Mathematical Sciences Research Institute, January 2014 - May 2014

Visiting Researcher, Department of Mathematics, Royal Institute of Technology (KTH), August 2013 - December 2013

Graduate Teaching Assistant, Mathematics Department, Wayne State University, Fall 2007 - Summer 2013

Math Tutor, Mathematics Department, Wayne State University, Fall 2004 - Summer 2007

Publications

The mod p homology of connective Morava E -theory, Arxiv: 1704.07248.

Squaring operations in the $RO(C_2)$ -graded and real motivic Adams spectral sequence, Arxiv: 1702.04632.

Power operations in the Künneth with applications to commutative ring spectra, submitted for publication, Arxiv:1602.06736.

On the Moduli space of A_∞ -Structures, with John Klein, accepted for publication in Proceedings of the Conference on Manifolds, K-Theory, and Related Topics, Edited by: G. Arone, B. Johnson, P. Lambrechts, B. Munson, and I. Voli?

Organizational work

European Talbot: Dualities in Algebra, Geometry, and Topology Mentored by John Greenlees and Mike Hill Niedersachsen, Germany Coorganized with Bertram Arnold, Tobias Barthel, and Magdalena Kedziorek

European Talbot: Topological aspects of quantum field theory Mentored by Chris Schommer-Pries and Peter Teichner Winterberg, Germany Coorganized with Tobias Barthel, Amalie Høgenhaven, and Magdalena Kedziorek

Midwest Topology seminar: Robert Bruner's 65th Birthday Wayne State University, USA Coorganized with Mark Behrens and Daniel Isaksen

Minicourse by Denis-Charles Cisinski on Descent in Motivic Triangulated Categories Universität Osnabrück, Germany Coorganized with Markus Spitzweck

European Talbot: Invariants of structured ring spectra 2015 Mentored by Bjorn Dundas and Birgit Richter Klosters, Switzerland Coorganized with Tobias Barthel

Research Visits

Center for Deformation and Symmetry, University of Copenhagen, May 11th-15th 2015

Research group of Kathryn Hess, École Polytechnique Fédérale de Lausanne, May 2011

Contributed Talks

Commutative Algebra in Stable Homotopy theory, Conference on Combinatorial Structures in Geometry, Osnabrück, Germany

Power operations in Adams spectral sequences, Fall 2015 Midwest Topology Seminar: Honoring Robert Bruner on the occasion of his 65th birthday, Detroit, Michigan, USA

Commutative S -algebras and relative smash products, 23rd NRW Topology meeting, Münster, Germany

Power Operations and Commutative Ring Spectra, AMS Special Session on Homotopy Theory, Baltimore, Maryland, USA

Power Operations on Highly structured Ring Spectra, CMS Special Session on Homotopy Theory, Regina, Saskatchewan, Ca., June 2012

Power Operations and the Künneth Spectral Sequence, 10th Annual Graduate Student Topology Conference, Indiana University, March 2012

Operations and the Bar Construction, Young Topologists Meeting, École Polytechnique Fédérale de Lausanne, June 2011

On the Mod 2 Cohomology of the Steenrod Algebra, Michigan Undergraduate Mathematics Conference, University of Michigan at Flint, October 2005

Invited Seminar Talks

Universität Bonn Topology seminar, May 2017

Ruhr-Universität Bochum Topology seminar, August 2017

École Polytechnique Fédérale de Lausanne Topology seminar, December 2015

Universität Wuppertal Topology seminar, December 2015

Universität Regensburg Topology seminar, November 2015

Universität Bonn Topology seminar, March 2015

Universität Münster Leray seminar, November 2014

Purdue University Topology seminar, October 2014

University of Kentucky Topology Seminar, April 2014

University of Oslo Topology Seminar, November 2013

University of Bergen Topology Seminar, November 2013

University of Angers Topology Seminar, October 2013

University of Copenhagen Topology Seminar, October 2013

Royal Institute of Technology (KTH) Algebra and Geometry Seminar, September 2013

Princeton University Algebraic Topology Seminar, March 2013

Northwestern University Topology Seminar, December 2012

University of Chicago Algebraic Topology Seminar, December 2012

Johns Hopkins University Topology Seminar, November 2012

University of Virginia Topology Seminar, October 2012

University of Illinois Urbana-Champaign Topology Seminar, September 2012

University of California Riverside Topology Seminar, March 2012

Wayne State University Topology Seminar, February 2012

University of Western Ontario Geometry and Topology Seminar, December 2011

Wayne State Topology Seminar, September 2010

Workshop Talks

Examples of Spectral Sequences European Autumn School in Topology 2016, September 2016
Tate Theory, Talbot Workshop 2013: Chromatic Homotopy Theory, April 2013
Computations in THH and TC, WCATSS 2012: Algebraic K-theory, July 2012
Orthogonal Calculus II: Examples, Talbot Workshop 2012: Calculus of Functors, May 2012

Conferences Attended

28th NRW Topology Meeting, Bielefeld, November 2017
European Talbot: Dualities in Algebra, Geometry, and Topology, Geestland, June 2017
The Transatlantic Transchromatic Homotopy Theory Conference, Regensburg, June 2017
27th NRW Topology Meeting, Wuppertal, April 2017
SPP 1786 Annual meeting, Wuppertal, March 2017
26th NRW Topology Meeting, Osnabrück, April 2016
European Autumn School in Topology 2016
Conference on Combinatorial Structures in Geometry, Osnabrück, Germany
Motivic Homotopy Groups of Spheres II, Essen, June 2016
European Talbot 2016: Topological aspects of quantum field theories, Winterberg, June 2016
Kan Memorial Lectures: Graeme Segal, Utrecht, June 2016
Banff Workshop: Operations in Highly Structured Homology Theories, Banff, May 2016
Motives and derived algebraic geometry, Essen, May 2016
25th NRW Topology Meeting, Essen, April 2016
24th NRW Topology Meeting, Bochum, November 2015
Minischool on Descent in motivic Triangulated categories, Osnabrück, October 2015
Fall 2015 Midwest Topology Seminar: Honoring Robert Bruner on the occasion of his 65th birthday, Detroit, October 2015
European Talbot 2015: Invariants of structured ring spectra, Klosters, June 2015
23rd NRW Topology Meeting, Münster, April 2015
22nd NRW Topology Meeting, Bonn, November 2014
Reimagining the Foundations of Algebraic Topology, MSRI, April 2014
Introductory Workshop: Algebraic Topology, MSRI, January 2014
Connections for Women: Algebraic Topology, MSRI, January 2014
Joint Math Meetings of the AMS and MAA, Baltimore, Maryland, January 2014

Topologie Algébrique et Applications, University of Angers, October 2013
Talbot 2013: Chromatic Homotopy Theory, South Lake Tahoe, April 2013
11th Annual Graduate Student Topology and Geometry Conference, University of Notre Dame, April 2013
Midwest Topology Seminar, University of Illinois at Urbana-Champaign, February 2013
Midwest Topology Seminar, Michigan State University, October 2012
West Coast Algebraic Topology Summer School, Stanford University, July 2012
Canadian Math Society Summer Meeting, University of Regina, June 2012
Talbot 2012: Calculus of Functors, Garden City, Utah, May 2012
Midwest Topology Seminar, Purdue University, April 2012
10th Annual Graduate Student Topology and Geometry Conference, Indiana University, March-April 2012
Southern California Algebraic Geometry Seminar, University of California San Diego, March 2012
Midwest Topology Seminar, Illinois State University, October 2011
Young Topologists Meeting, École Polytechnique Fédérale de Lausanne, June 2011
Algebra, Topology and Fjords Summer School, Nordfjordeid, Norway, June 2011
André Memorial Conference, École Polytechnique Fédérale de Lausanne, May 2011
Midwest Topology Seminar, University of Chicago, April 2011
Midwest Topology Seminar, Wayne State University, October 2010
West Coast Algebraic Topology Summer School, University of Oregon, August 2010
Midwest Topology Seminar, Northwestern University, April 2010
8th Annual Graduate Student Topology and Geometry Conference, University of Michigan, April 2010
Michigan Conference on Topology and Physics, University of Michigan, February 2010,
New Contexts in Homotopy Theory, University of Chicago, October 2009
Midwest Topology Seminar, University of Minnesota, May 2009
Midwest Topology Seminar, Purdue University, February 2009
6th Annual Graduate Student Topology and Geometry Conference, University of Illinois at Urbana-Champaign, March 2008
Midwest Topology Seminar, University of Illinois at Urbana-Champaign, October 2007
Midwest Topology Seminar, Wayne State University, April 2007
Midwest Topology Seminar, University of Illinois at Chicago, February 2007
Midwest Topology Seminar, Indiana University, October 2006
Category Theory and its Application: A Conference in Memory of Saunders MacLane, April 2006
Michigan Undergraduate Mathematics Conference, University of Michigan at Flint, October 2005

Teaching Experience As Primary Instructor

Proseminar: Representation theory of symmetric groups, Winter 2015-2016

Math 0993-Beginning Algebra: Fall 2010, Winter 2011

Math 0995-Intermediate Algebra: Spring/Summer 2009, Spring/Summer 2010, Winter 2009

Math 1050-Algebra with Trigonometry: Fall 2007, Winter 2008, Fall 2012

Math 1800-Elementary Functions: Spring/Summer 2008, Fall 2008, Fall 2009, Winter 2010, Winter 2012

Math 2010-Calculus 1: Spring/Summer 2009, Spring/Summer 2010

Math 2020-Calculus 2: Fall 2011

Teaching Experience As Assistant

Field and Galois theory, assistant to Markus Spitzweck, Summer 2016

Topology, assistant to Heinz Spindler, Summer 2015

Differential equations, assistant to Heinz Spindler, Winter 2014-2015

Non-teaching Departmental Activities

Graduate student seminar on schemes and stacks, Winter semester 2014-2015

Oberseminar Topologie semi-organizer, Summer 2015-Summer 2016

Coordinator of Mathematics Resource Center: Fall 2011-Winter 2012

Organizer of Wayne State Mathematics Student Seminar with Mike Catanzaro: Fall 2011-Winter 2012

Organizer of Wayne State Mathematics Student Seminar with Jim Veneri: Fall 2010-Winter 2011

Mathematical References, Referees

Robert Bruner, Wayne State University: rrb@math.wayne.edu

Oliver Röndigs, Universität Osnabrück: oroendig@uni-osnabrueck.de

Kathryn Hess, École Polytechnique Fédérale de Lausanne: kathryn.hess@epfl.ch