

David Ayala
Montana State University
Department of Mathematical Sciences
david.ayala@montana.edu

Employment

Montana State University, Bozeman, MT

Associate Professor, August 2014 - present.

Mathematical Sciences Research Institute (UC Berkeley), Berkeley, CA

Postdoctoral research fellow, December 2013 - June 2014.

University of Southern California, Los Angeles, CA

NSF postdoctoral research fellow, August 2012 - July 2013.

Harvard University, Cambridge, MA

NSF postdoctoral research fellow and instructor, June 2009 - August 2009,
and October 2010 - July 2012.

University of Copenhagen, Copenhagen, Denmark

Research postdoc and instructor, September 2009 - September 2010.

Education

Stanford University, Stanford, CA

PhD in Mathematics, June 2009

Thesis advisor: Ralph Cohen

Thesis title: *Geometric cobordism categories*.

University of Utah, Salt Lake City, UT

ScM in Mathematics, May 2004.

University of Utah, Salt Lake City, UT

ScB with honors in Physics, Magna Cum Laude, May 2004.

University of Utah, Salt Lake City, UT

ScB in Mathematics, Magna Cum Laude, December 2002.

Papers

- (1) D. Ayala, J. Francis, *Poincaré/Koszul duality*,
submitted, preprint available at <http://arxiv.org/abs/1409.2478>.
- (2) D. Ayala, J. Francis, *Zero-pointed manifolds*,
submitted, preprint available at <http://arxiv.org/abs/1409.2857>.
- (3) D. Ayala, J. Francis, H. Tanaka, *Factorization homology of stratified spaces*,
submitted, preprint available at <http://arxiv.org/abs/1409.0848>.
- (4) D. Ayala, J. Francis, H. Tanaka, *Local structures on stratified spaces*,
submitted, preprint available at <http://arxiv.org/abs/1409.0501>.

- (5) D. Ayala and R. Hepworth, *Configuration spaces and Θ_n* ,
to appear in Proceedings of the AMS. Preprint available at <http://arxiv.org/abs/1202.2806>.
- (6) D. Ayala, *Geometric cobordism categories*,
preprint available at <http://arxiv.org/abs/0811.2280>.
- (7) D. Ayala, *Stable topology of moduli of holomorphic curves in $\mathbb{C}P^n$* ,
preprint available at <http://arxiv.org/abs/0811.2274>.
- (8) D. Ayala and R. Cavalieri, *Counting bitangents with stable maps*,
Expositiones Mathematicae, **24** (2006), no. 4, 307-335.

Honors

- MSRI Postdoctoral Research Fellow, 2014.
- National Science Foundation Postdoctoral Research Fellowship, 2009 - 2012.
- Excellence in teaching award, Stanford, 2009.
- ARCS Fellowship, 2007-2008.
- Humanities and Sciences Fellowship, 2004-2005.
- VIGRE Fellowship, 2003-2004.
- State of Utah William Lowell Putnam Competition winner, 2001, 2002.
- American Physical Society Scholar, 2000-2002.
- State of Utah Science Sterling Scholar winner, 2000-2001.

Upcoming Professional Activities

Invited Speaker - Oberwolfach Institute for Mathematics, Oberwolfach, Germany, March 2015.

Distinguished Presenter - Several week-long course on recent collaborative work, as a part of the “Homotopy Theory, Manifolds, and Field Theories” summer program at the Hausdorff Institute of Mathematics, Bonn, Germany, May - July 2015.

Organizer - A week-long conference framed by recent collaborative work at the Banff International Research Station for Mathematical Innovation and Discovery, August 2015.

Selected Recent Professional Activities

Invited Speaker - Mathematical Sciences Research Institute’s “Reimagining the Foundations of Algebraic Topology” conference, title: “Poincaré/Koszul duality”; October 2013.

Invited Speaker - Max Plank Institute for Mathematics, title: “Poincaré/Koszul duality”; October 2013.

Panelist - Panelist for “Future Directions in Algebraic Topology” at the Stanford Birthday Conference, July 2012.

Panel reviewer - Participated in NSF panel reviews, 2011.