

TODD FISHER

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PROFESSIONAL EXPERIENCE

Assistant Professor, Brigham Young University, June 2007-present.

Research Associate, University of Maryland, September 2004-June 2007.

ACADEMIC PREPARATION

Ph.D. Mathematics Northwestern University, June 2004. Thesis: *On the Structure of Hyperbolic Sets*, Advisor: Amie Wilkinson.

M.S. Mathematics, Brigham Young University, August 1999. Thesis: *Qualitative Behavior for a Nonlinear Convection-Diffusion Equation with Conservation*, Advisor: Christopher Grant.

B.S. Mathematics, Minor Physics, Brigham Young University, April 1998.

REFEREED JOURNAL PUBLICATIONS

1. *Transitive hyperbolic sets on surfaces*, submitted.
2. *Resolving extensions of finitely presented systems*, submitted.
3. *Maximal entropy measures for certain partially hyperbolic, derived from Anosov systems*, joint work with Jérôme Buzzi, Martin Sambarino, and Carlos Vásquez, submitted.
4. *Symbolic extensions for partially hyperbolic diffeomorphisms*, joint work with Lorenzo J. Díaz, submitted.
5. *Markov partitions for hyperbolic sets*, joint work with Himel Rathnakumara, *Involve*, **2**(5), 547-555, 2009.
6. *Quasi-Anosov diffeomorphisms of 3-manifolds*, joint work with Jana Rodriguez-Hertz, *Trans. Amer. Math. Soc.*, **36**, 3707-3720, 2009.
7. *Trivial centralizers for codimension-one attractors*, *Bull. Lond. Math. Soc.*, **41**(1), 51-56, 2009.
8. *Trivial centralizers for Axiom A diffeomorphisms*, *Nonlinearity*, **21**(11), 2505-2517, 2008.

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9. *Supergrowth of the number of periodic orbits for non-hyperbolic homoclinic classes*, joint work with Lorenzo J. Díaz and Christian Bonatti, *Discrete Contin. Dyn. Syst.*, **20**(3):589-604, 2008.
10. *The Topology of Hyperbolic Attractors on Compact Surfaces*, *Ergodic Theory and Dynamical Systems*, **26**(05), 2006, pp 1511-1520.
11. *Hyperbolic Sets that are Not Locally Maximal*, *Ergodic Theory and Dynamical Systems*, **26**(05), 2006, pp 1491-1509.
12. *Hyperbolic Sets with Nonempty Interior*, *Discrete Contin. Dyn. Syst.* **15**(2), 2006, 433-446.
13. *Blowup in a Mass-Conserving Convection-Diffusion Equation with Superquadratic Nonlinearity*, with Christopher P. Grant, *Proceedings of the American Mathematical Society*, 129 (2001), 3353-3362.

OTHER REFEREED PUBLICATIONS

1. *Problems in dynamical systems*, in *Recent Progress in Dynamics MSRI Publications Volume 54*, 2007. (Contributor)
2. *Uniformly hyperbolic attractors*, www.scholarpedia.org/article/Uniformly_hyperbolic_attractors
3. *On the Structure of Hyperbolic Sets*, Ph. D. dissertation.
4. *Qualitative Behavior for a Nonlinear Convection-Diffusion Equation with Conservation*, Masters Thesis, Brigham Young University, 1999.

INVITED PRESENTATIONS

- International workshop on global dynamics beyond uniform hyperbolicity, Beijing, China, Aug 2009.
- REU, Provo, July 2009.
- Summer school on nonlinear and stochastic dynamics, Sichuan University, Chengdu, China, June 2009.
- International Conference on Nonlinear and Stochastic Dynamics, Chengdu, China, June 2009.
- Rio dynamical systems seminar, PUC-Rio, Rio de Janeiro, Brazil, May 2009.
- Semi-annual Workshop in Dynamical Systems at Maryland, Apr 2009.
- MAA Regional conference, Provo, Mar 2009.
- Steven F. Austin State University, Departmental Colloquium, Texas, November 2008.
- REU, Provo, July 2008.
- University of California, Irvine, Dynamics Seminar, May 2008.
- Joint Meetings, Special session on hyperbolic dynamics, San Diego, California, Jan 2008.
- AMS Central Sectional Meeting, Chicago, Illinois, Oct 2007.
- AMS Southeastern Sectional Meeting, Davidson, North Carolina, March 2007.
- Semi-annual Workshop in Dynamical Systems and Related Topics, State College, Nov 2006.

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- Brigham Young University, Departmental Colloquium, Sept 2006.
- AMS Western Sectional Meeting at San Francisco, April 2006.
- Montclair State University, Departmental Seminar, April 2006.
- Univ of Maryland Baltimore Campus, Diff Eq Seminar, March 2006.
- George Washington University, Dynamics Seminar, October 2005.
- Midwest Dynamical Systems Conference, Ann Arbor, April 2004.
- AMS Midwest Regional Meeting, Athens Ohio, March 2004.
- Semi-annual Workshop in Dynamical Systems at Maryland, March 2004.
- International Workshop on Robustness and Partial Hyperbolicity, Buzios, Brazil, November 2003.
- Elmhurst College, Illinois, October 2003.
- Semi-annual Workshop in Dynamical Systems at Maryland, March 2003.

ACADEMIC VISITS

- PUC-Rio, Rio de Janeiro, Brazil, May 2-10, 2009

HONORS AND CITIZENSHIP

- PI for 2 NSF conference grants.
- Organizer for the Rocky Mountain Conference on Dynamical Systems, May 2008.
- Organizer for special session on research, Regional MAA conference, March 2008.
- Judge for the poster session at the Joint Mathematics Meeting, January 2008.
- Organizer for special session at the Joint Mathematics Meeting, January 2008.
- Project Next Fellow, 2007-2008.
- Reviewer for Mathematical reviews, 2007-present.
- Referee for *Dynamical Systems an International Journal*, *Ergodic Theory and Dynamical Systems*, *Moscow Mathematical Journal*, and *Nonlinearity*, .
- Organizer for special session at the Joint Mathematics Meeting, January 2006.
- Organized and ran a teaching workshop for incoming graduate students, 2001.
- *Vigre Post Doc*, University of Maryland, 2004-06.
- *Northwestern University Searle Center for Teaching Excellence Teaching Assistant Fellow*, Northwestern University, 2001.
- *Northwestern University Fellow*, 1999-2000.
- *Magna Cum Laude Graduate*, Brigham Young University, 1998.
- *Excellence in Teaching*, Brigham Young University, 1999.

CONFERENCES ATTENDED

- *International workshop on global dynamics beyond uniform hyperbolicity*, Beijing, China, Aug 2009.
- *International Conference on Nonlinear and Stochastic Dynamics*, Chengdu, China, June 2009.
- *Semi-Annual Workshop in Dynamical Systems*, University of Maryland, April 2009.
- *Rocky Mountain Conference on Dynamical Systems*, Park City, Utah, May 2008.

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- *Semi-Annual Workshop in Dynamical Systems*, University of Maryland, March 2008.
- *Regional MAA Meeting*, Provo, Utah, March 2008.
- *Joint Mathematics Meeting*, San Diego, California, January 2008.
- *Midwest Dynamical Systems* Ann Arbor, MI, Oct 2007.
- *AMS Central Sectional Meeting*, Chicago, Illinois, Oct 2007.
- *Mathfest*, San Jose, California, Aug 2007.
- *AMS Southeastern Sectional Meeting*, Davidson, North Carolina, March 2007.
- *Semi-annual Workshop in Dynamical Systems and Related Topics*, State College PA, Nov 2006.
- *International Workshop on Global Dynamics Beyond Uniform Hyperbolicity*, Chicago, May 2006.
- *AMS Western Sectional Meeting*, San Francisco, April 2006.
- *Semi-Annual Workshop in Dynamical Systems*, University of Maryland, March 2006.
- *Joint Mathematics Meeting*, San Antonio Texas, January 2006.
- *Partially Hyperbolic Dynamics, Laminations, and Teichmuller Flow Workshop*, Fields Institute, Toronto, Canada, January 2006.
- *Midwest Dynamical Systems*, Evanston Illinois, October 2005.
- *Semi-Annual Workshop in Dynamical Systems*, Penn State, October 2005.
- *Northwest Dynamics Symposium*, Victoria, Canada, August 2005.
- *International Congress on Dynamical Systems*, Angra dos Reis, Brazil, August 2005.
- *Midwest Dynamical Systems*, Minneapolis Minnesota, April 2005.
- *Semi-Annual Workshop in Dynamical Systems*, University of Maryland, March 2005.
- *Midwest Dynamical Systems*, Ann Arbor Michigan, April 2004.
- *AMS Midwest Regional Meeting*, Athens Ohio, March 2004.
- *Semi-Annual Workshop in Dynamical Systems*, University of Maryland, March 2004.
- *International Workshop on Robustness and Partial Hyperbolicity*, Buzios Brazil, November 2003.
- *Semi-Annual Workshop in Dynamical Systems*, Penn State, October 2003.
- *Midwest Dynamical Systems*, Indiana University - Purdue University Indianapolis, October 2003.
- *Midwest Dynamical Systems*, Northwestern University, April 2003.
- *Semi-Annual Workshop in Dynamical Systems*, University of Maryland, March 2003.
- *Midwest Dynamical Systems*, University of North Carolina Asheville, April 2002.
- *Midwest Dynamical Systems*, University of Colorado, October 2001.
- *Conference on Partial Hyperbolicity*, Northwestern University, June 2001.