

**David Treumann**  
**Curriculum Vitae**

**Address**

Department of Mathematics, Boston College  
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**Education**

2002–2007 Princeton University, Ph.D. Thesis advisor: Robert MacPherson.  
2000–2002 University of Minnesota, B.Sci. summa cum laude

**Positions**

Member, MSRI, Fall of 2014  
Assistant Professor, Boston College. 2012–present  
Boas Assistant professor, Northwestern University. 2009–2012.  
Dunham Jackson Assistant professor, University of Minnesota. 2008–2009.  
Postdoctoral fellow, Northwestern University. 2007–2008.

**Awards and grants**

NSF Grant DMS-1510444, “Legendrian knots and Lagrangian surfaces,” 2015-2018  
NSF Grant DMS-1206520, “Mirror symmetry and the microlocal theory of sheaves,” 2012–2015  
Sloan Research Fellowship, 2013–2015  
AMS-Simons Travel Grant 2011–2013

**Papers**

*Published or Accepted*

1. with Akshay Venkatesh, *Functoriality, Smith theory, and the Brauer homomorphism*, Annals of Math., to appear.
2. with Robert Lipshitz, *Noncommutative Hodge-to-de Rham spectral sequence and the Heegard Floer homology of double covers*, J. European Math. Soc., to appear.

3. *Morse theory and toric vector bundles*, Trans. AMS, to appear.
4. with Nicolò Sibilla and Eric Zaslow, *Ribbon graphs and mirror symmetry*, Selecta Math., 2014.
5. With Helge Ruddat, Nicolò Sibilla, and Eric Zaslow, *Skeleta of affine hypersurfaces*, Geometry and Topology, 2014
6. with Bohan Fang, Chiu-Chu Melissa Liu, and Eric Zaslow, *The coherent-constructible correspondence for toric Deligne-Mumford stacks*, IMRN 2012.
7. with Bohan Fang, Chiu-Chu Melissa Liu, and Eric Zaslow, *T-duality and homological mirror symmetry for toric varieties* Advances in Math, **229** 2012.
8. with Pramod Achar, *Purity and decomposition theorems for staggered sheaves*, J. Inst. Math. Jussieu, **11** 2012.
9. with Bohan Fang, Chiu-Chu Melissa Liu, and Eric Zaslow, *A categorification of Morelli's theorem*, Inventiones Math. **186** 2011
10. with Bohan Fang, Chiu-Chu Melissa Liu, and Eric Zaslow, *The coherent-constructible correspondence and Fourier-Mukai transforms*, Acta Math Sinica **27** 2011
11. with Pramod Achar, *Baric structures on triangulated categories and coherent sheaves*, IMRN 2011
12. with Bohan Fang, Chiu-Chu Melissa Liu, and Eric Zaslow, *The coherent-constructible correspondence and homological mirror symmetry for toric varieties*, Geometry and Analysis Vol. 2, Adv. Lect. Math (ALM) **18**, Higher Education Press, 2010
13. *Staggered t-structures on toric varieties* J. Algebra **323** 2010
14. *Stacks similar to the stack of perverse sheaves*, Trans. Amer. Math. Soc. **362** 2010
15. *A topological approach to induction theorems in Springer theory*, Represent. Theory **13** 2009

16. *Exit paths and constructible stacks*, Compositio Math. **145** 2009

*Submitted*

available on arxiv.org

17. *Representations of finite groups on modules over  $K$ -theory*, 2015

18. with Vivek Shende and Eric Zaslow, *Legendrian knots and constructible sheaves*, 2014

19. *Smith theory and geometric Hecke algebras*, 2011

## Service

*Referee for*

- Advances in Mathematics,
- Transactions of the American Mathematical Society,
- Duke Mathematical Journal,
- Theory and Applications of Categories,
- Mathematische Zeitschrift,
- NSF and NSA research grants.

*at Boston College*

- Faculty liaison to Boston College Math Society, 2012-2014.
- Personnel committee (postdoc) 2012-2013, personnel committee (tenure-track) 2013-2014.
- Graduate admissions committee 2013-2014.
- Supervised Arnav Roy (BC'17) and his Boston College Undergraduate Research Fellowship on Smith theory and elementary number theory, summer 2014.

- Supervised Daniel Gallagher (BC'17) summer research project on Legendrian knots with binary front projections.
- Represented Boston College at “International Cooperation, Innovation and Collaboration” conference and Memorandum of Understanding signing ceremony, Tsinghua University May 2013.

*at Northwestern*

- Five lectures on graphs and their eigenvalues at “Discrete and continuous geometries, an undergraduate conference,” July 2010.
- with Erik Carlsson, organized Geometry and Physics Seminar for 2009-2010.

*at MSRI, fall 2014*

- with Kevin McGerty and Kiran Kedlaya, organized Working Group on Irregular Singularities.
- with Ivan Mirkovic, organized Geometric Representation Theory Members Seminar.

**Lectures** (2014-on)

- March 2016, at TSIMF Workshop on Geometric Representation Theory and Related Topics, Phoenix Town, Sanya (China)
- December 2015 at Conference on Geometric and Categorical Methods in Representation Theory, Sunshine Coast, Queensland (Australia)
- July 2015 at PCMI summer session on Geometry of moduli spaces and representation theory, Park City Utah.
- “Legendrian knots and Lagrangian surfaces,” MIT Geometry and Topology seminar, April 13 2015
- “Functoriality, Smith theory, and the Brauer homomorphism,” UC Santa Cruz colloquium, November 25 2014
- “Lagrangian fillings of Legendrian knots,” USC Algebra seminar, November 3 2014

- “What is an  $L$ -group?” with Wee Teck Gan, MSRI, October 29 2014.
- “Stokes examples and the wild annulus,” MSRI, October 28 2014.
- “Lagrangian fillings of Legendrian knots,” Stanford Symplectic Geometry seminar, October 13 2014.
- “Legendrian knots and constructible sheaves” KSU Mirror Symmetry seminar, March 5 2014
- “Functoriality, Smith theory, and the Brauer homomorphism,” UW Madison colloquium, February 7 2014.